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Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

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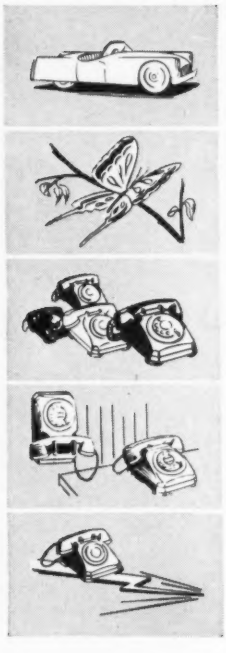

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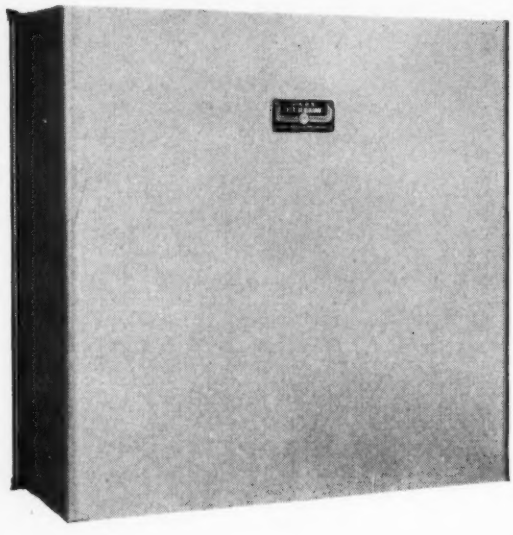

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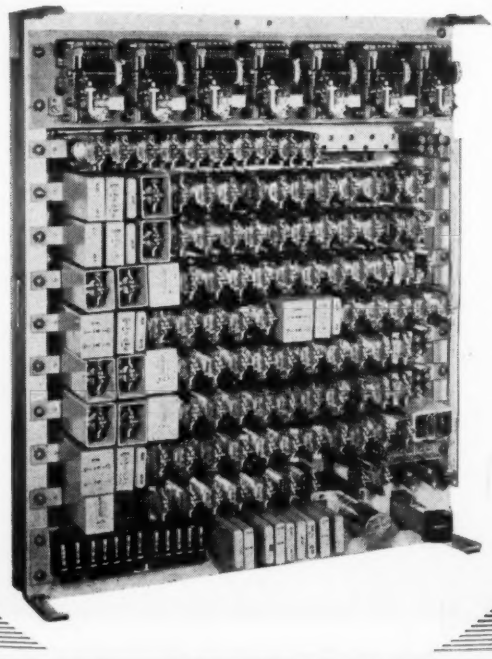

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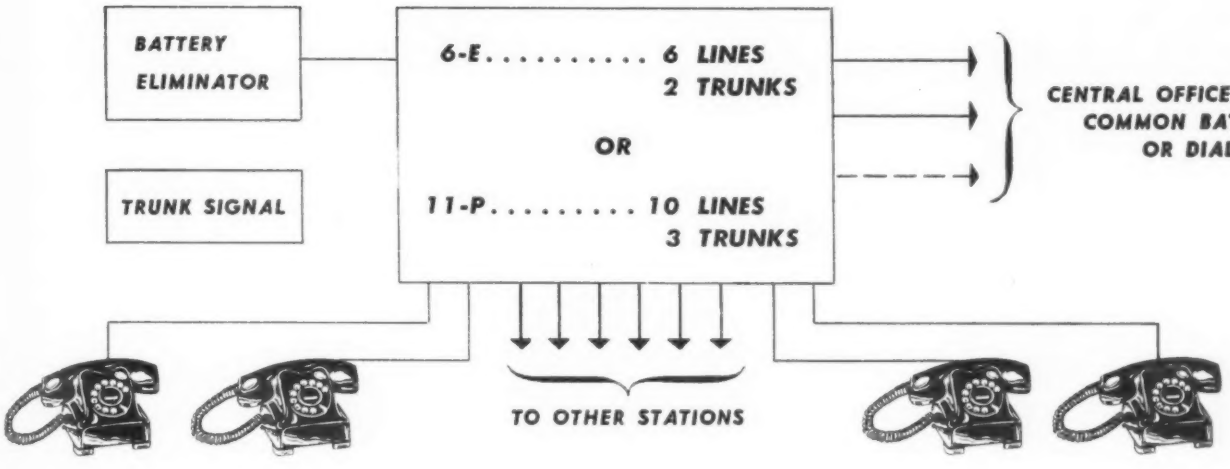

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FLASHES AND PLUGS

ALL IN THE POINT OF VIEW. Contributing to the telephone industry climate in which sales are aggressively sought, are many novel ideas, among them being the display of colored telephones at supermarkets and sale of a year's paid-in-advance telephone service with new houses.

Now the Southwestern (Bell) *Telephone News* tells the story of the evolution of another sales spur. The *News* stated:

"To whip up sales enthusiasm between units 2A and 2B, Wayne Little, Oklahoma City, Okla., business representative, bought a small turtle as a "booby" prize for the low unit.

"It worked fine for a couple of days until the losers decided the turtle was cute.

"A hasty strategy session amended the rules. Now 'Shelby,' as he's called, is the pride and joy . . . and possession . . . of the high unit."

•

TIME MARCHES ON. An antique-type telephone is no longer an item to be consigned to the moldering confines of a museum, comments the Los Angeles *Times*.

"Resurrected, renovated and reconverted, it makes a delightful decorator item.

"The old telephone box of 1900 vintage can be used as a planter, a spice and spool cabinet, a radio cabinet or an intercommunication system."

•

FINAL STRAW. A thief in Connecticut added insult to injury when he telephoned a resident of Cheshire, Conn., recently in the wee hours to tell him his automobile had been stolen.

That wasn't all though. The culprit also took the two evergreen trees that were on Fazzone's front lawn.

•

TALL STORY. On a hot day recently, Gloversville, N. Y., firemen took a powder after one look.

They raced to a house after a passerby reported dense white smoke pouring from an upper window.

Firemen scurried up a ladder then quickly retreated to report that a woman was energetically powdering her nose.

•

FAIR WARNING. This notice has been posted on the wall of a municipal judge in the Hobbs, N. M., city hall:

"While in this office, speak in low, soothing tone and do not disagree with me in any manner.

"Please be informed that when one has reached my age, noise and nonconcurrence cause gastric hyper-peristalsis, hyper-secretion of hydrochloric acid and inflammation of the gastric mucosa, and

"I become unpleasant."

CIRCULATION

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Since 1901

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IN THE NATION'S CAPITAL

BY FRANCIS X. WELCH, WASHINGTON EDITOR

Appraises record of first session of 84th Congress. Bill gives AEC authority to give away "atomic cities' " telephone systems to municipalities. REA consultants meet.

THE FIRST session of the 84th Congress is now history. The usual hindsight appraisals of whether it was a good, bad, or indifferent Congress are now being published throughout the land in newspapers, magazines, radio and TV interviews, etc. This correspondent's appraisal is one of detachment and caution.

On the one hand, the 84th Democratic-controlled Congress did give Republican President Eisenhower more cooperation on both international and domestic legislation than many observers had anticipated when the session began.

On the other hand, the Congress still has a lot of important work to do and wasted a lot of time digging around for purely political issues (chiefly directed against the business community) when it could have been sawing legislative wood.

On the whole, the conservative thing to do would be to defer judgment until the second session which starts next January. After all, it is risky business trying to judge any kind of a two-act performance during the intermission.

There are several ways of looking at the achievements of a session of Congress. Some critics are cast down unless very large quantities of legislation (good or bad) have been enacted. Others test the congressional performance by the extent of its cooperation with the executive. One other way, less seldom attempted, is to reflect how lucky the country is that some laws did *not* pass.

Applying this last test to the session just concluded, it must be stated that the utilities did get a last-minute reprieve from a very wrong-headed piece of legislative legerdemain in the House of Representatives' treatment of the highway bill. It will be recalled that the Senate passed a bill incorporating the long-sought principle that telephone companies and other utilities ought to be reimbursed in part at least for the expense of relocating their facilities, as the result of federal-aid highway construction. The House Committee on Public Works recognized this principle likewise in reporting out its own variation of the President's highway program.

As expected and predicted, a battle developed in the House over the Republican plan for bond financing and the Democratic plan for financing through taxation.

The House proceeded to defeat both proposals, which killed the bill for the session and perhaps for the rest of the Congress. But before it did so, the House rejected by a vote of 125 to 75 the committee's proposal for reimbursing utilities for relocation expenses.

This reversal of the committee's recommendation was the direct result of the efforts of the so-called highway lobby, which has always been very powerful in the lower house.

Representative Gentry (D., Tex.) helped to stampede the vote against utility relocation funds by purporting to read telegrams from a great number of state highway commissioners opposed to relieving the utilities from relocation expense.

Actually, champions of that provision of the committee bill could have made a more effective showing by reading some of the reactions in favor of utility reimbursement from the various state public utility commissioners. But this was not done; and the highway lobby had its brief moments of victory, or so it thought.

Now the bill is back in committee and there is some question about whether it can be moved off of dead center during the coming session, in view of the almost even division of sentiment on the question of financing the program. But at least the public utilities have the doubtful comfort of knowing that passage of the House bill in the form amended by the vote on highway relocation would have gone a long way towards spelling the doom of the efforts by all of the utility industries (publicly owned as well as private) to get justice done on this subject. At least renewed efforts can be made between now and the next session to get the provision back into the House committee bill. Of course, it is still very likely that the highway bill is dead for the rest of the Congress.

Next year is an election year when all Congressmen will be very sensitive politically. The Democrats don't want to give in to the Republican plan of bond financing for highway building and the Republicans, generally speaking, do not want to go along with the Democratic program of taxing the users of the highways. There are enough uncommitted votes to keep the whole bill bottled up, as it was in the session just closed. If that happens, President Eisenhower or whoever is the Republican presidential candidate in 1956, can point the finger of criticism at the 84th Congress for failing in its responsibility on this important measure.

But public utilities will have to work a lot harder if they are going to put back the relocation provision in any highway bill which may be revived next year.

Incidentally, the problem of relocation cost resulting from highway construction will be given special consideration on the program of the American Bar Association, section of public utility law, meeting later this month in Philadelphia. Among those

slated to discuss this problem are Austin L. Roberts Jr., general solicitor, National Association of Railroad & Utilities Commissioners; E. C. Yokley, former counsel for the city of Nashville, Tenn.; and John Lansdale Jr., counsel for the Ohio Turnpike Commission. Mr. Roberts and Mr. Yokley testified before congressional committees during the current session, when the Senate passed a bill that would have provided for limited reimbursement.

One of the bills which *was* passed during the recent session, very much contrary to the sentiment of the United States Independent Telephone Association, was the increase in the minimum wage from 75 cents an hour to $1.00. So much has been said on this subject in this department that further discussion is unnecessary at this late date. There was some speculation that the President might be disposed to veto the measure because it provides for an increase to $1.00 instead of 90 cents an hour, as requested by the President. But it seemed very unlikely that the President would fail to sign the measure.

Free Utility Plants for Cities?

Another measure which passed both houses of Congress at the last minute, by unanimous consent, was the Anderson Bill (S. 2630) authorizing disposal of utility and other facilities in the "atomic cities" of Oak Ridge, Tenn., and Richland, Wash. Here, too, it seemed likely that President Eisenhower would sign the measure.

This bill is of interest to the telephone industry because it could lead to a municipal operation of telephone systems in Richland. Under the measure, the Atomic Energy Commission (AEC) may actually give away such facilities for local municipal operation without charge. But any public utility company wishing to acquire the same would have to pay for them.

The point to be stressed here is the possibility that the municipality of Richland, under the lure of getting something for nothing, may persuade the AEC that the new congressional act amounts to a "directive," or at least a "preference" for giving away the utility properties for municipal operation —as distinguished from selling them to private operators. The Atomic Energy Committee said in its report:

"The telephone system in Richland has been a particularly knotty problem since the city desires to have the phone system for itself in order to provide revenues to help operate the city. The attorney-general for the state of Washington has ruled that the city of Richland will not have the legal authority to receive the telephone system under present statutes.

"The telephone company which had the franchise in the area (General Telephone Co. of the Northwest) before it was partially condemned at the time of the acqaisition of the real estate for the Manhattan Engineering District desires to re-establish itself in accordance with the rights given it in its franchise."

The committee said that the reason AEC is authorized to *give* any utility to a city "is that it may be in the best interests of the United States, if all other factors are equal, to give the utility to the city and permit the city to use the operating revenues as increased sources of revenues for the city." Talk about the "great give-away." The policy here seems to be "Don't sell unneeded federal property to tax-paying private business, when you can *give* it away to a tax-exempt city to operate for local benefit."

Among other things, the bill provides for transfer of utility systems to any one of the following parties: (1) The city, (2) the state, (3) any political sub-division, and (4) any person, firm, corporation, or other legal entity.

The bill provides that in determining the transferee, the commission set up to dispose of the government's properties may consider: (1) The pattern of ownership of comparable utilities in the state, (2) the ability of the proposed transferee to operate the utility, (3) the probable price of the utility and the ability of the transferee to pay it, and (4) the desires of the voters of the community expressed directly.

It may be that under the general language and alternatives provided here, the federal authorities may find ample justification for selling the Richland telephone properties to the private company. If not, public ownership will have its foot in the door of the telephone industry in Richland, thanks to a "give-away" of the federal taxpayers' property.

The charges and terms for transfer of any utility may be established by advertising and competitive bid, or by negotiated sale, according to the provisions of the bill. All utility properties are subject to transfer under these provisions, except property deemed needed by the disposing commission for its own use. Complete disposition is to take from four to 10 years.

REA Consultants Recommendations

The REA, on Aug. 2, released the results of an interesting meeting held in Washington, D. C., on July 21 between a group of consultants to the Rural Electrification Administration. The meeting was composed of REA representatives as well as officials of both Independent and Bell System telephone groups and cooperatives. They agreed on certain recommendations which would govern future administration of the REA rural telephone loan program. *(See item on another page for names of those taking part in the Washington meeting.)*

Following were the recommendations made to the Rural Electrification Administration by the consultants group:

(1) Under the REA telephone loan program established by Congress in October, 1949, to help improve and extend telephone service, the REA has made long-term, low-interest loans to finance modern telephone service for more than half a million farm families and other rural subscribers. It is recognized that this is only a part of the tremendous progress made by the whole industry in modernizing and expanding rural service. Unquestionably, this progress permanently improves the economic status and social life of people in rural areas and is in the national interest.

It has been reassuring to see the steps taken to encourage cooperation between government and industry and also the progress made in solving various problems so as to provide comprehensive networks of telephone facilities.

The consultants urge that all components of the industry continue to work together in order to accomplish the great amount of improvement and expansion that is still needed to adequately serve farm families and other rural subscribers, and that the REA Administrator and his staff continue their program of implementing this policy of cooperation.

(2) That REA take the leadership in sponsoring and scheduling accounting, management, public relations, and engineering seminars for REA telephone borrowers and all other interested parties, in cooperation with representatives of the telephone industry.

(3) That a survey be made of REA borrowers and potential borrowers for the purpose of learning which aspects of the program are liked and which are disliked and the reasons therefor, for obtaining suggestions which would make loan requirements more nearly fit the needs and abilities of applicants, and for determining ways in which the program may be improved. Results of such a survey would be for the confidential use of the administrator and his staff in determining policies and practices to be followed.

(4) We commend the efforts of REA to encourage wider use of independent judgment by its engineers in assisting borrowers to promptly resolve engineering problems. We concur with the telephone engineering division's position that practices specified in the REA engineering manuals are guides and that flexibility is necessary in applying the standards to specific borrower situations.

REA Telephone Loans in Five States Amount to $2,792,000

Loans totaling $2,792,000 were made by the Rural Electrification Administration to improve and extend telephone service in rural areas of Illinois, North Carolina, Tennessee, Kentucky and Kansas, the U. S. Department of Agriculture announced on July 27. One of these loans, processed by REA within 48 hours after the application was submitted, helps rebuild the system of the Udall (Kan.) Telephone Co., following devastation of the company's exchange office by tornado.

Details of the five loans follow:

Champaign County Telephone Co., Champaign, Ill., on July 18 received an allocation of $127,000, fifth loan to this borrower.

The company will use the loan funds to complete construction of the first two sections of the system; to provide facilities to serve 15 subscribers and 30 switchers not included in previous loans; to construct a new garage-warehouse at Tolono in the first section of the system; and to provide adequate garage and storage facilities at Milford in the second section.

To date, the seven exchanges which will serve the first section of the company's system have been cut over and about 1600 subscribers are receiving automatic service in that area.

REA has approved loans totaling $1,969,132 to the Champaign company, which has plans to bring automatic service to 4,855 subscribers and 30 switchers through 14 central offices. The completed system will consist of 978 miles of line in Champaign, Ford, Iroquois, Piatt and Vermilion counties.

James L. Capel is president and Max G. Hoagland is manager of the Champaign county company.

*

Surry Telephone Membership Corp., Dobson, N. C., on July 20 was allocated $342,000, second loan to this borrower.

These loan funds, together with the first loan of $595,000 will be used by the cooperative to provide automatic service to 1,972 rural subscribers in Stokes and Surry counties.

Automatic central offices for the system will be located at Level Cross, Oak Grove, Westfield and Zephyr. The Level Cross exchange was cut over to automatic operation late in 1954. The completed system will consist of 536 miles of line.

W. H. Hardy is president and Warner Ellidge is manager of the Surry cooperative.

*

Highland Telephone Cooperative, Sunbright, Tenn., received allocation, also on July 20, of $1,427,000.

This new cooperative proposes to acquire and expand with REA loan funds the facilities of the Southern Continental Telephone Co. in northeastern Tennessee. Continental's system at present provides magneto, common battery and some automatic service to 1,174 subscribers through exchanges at Oneida, Wartburg, Sunbright, Petros and Oakdale.

The cooperative plans to offer all-automatic service to the present subscribers of Continental and to 1,468 now without telephone service, all in Scott and Morgan counties. The completed system will serve 2,642 subscribers with 519 miles of line. This includes 96 miles of rebuilt line and 406 miles of new construction.

New automatic central offices will be located at Oneida, Wartburg, Petros, Oakdale, Huntsville, Sunbright and Robbins. Extended area service will be provided between some exchanges Toll and operator services are to be furnished by the Harriman office of the Southern Bell Telephone & Telegraph Co.

W. H. Swain is president of the Highland organization.

*

Logan County Rural Telephone Cooperative Corp., Inc., Russellville, Ky. (temporary address: Auburn); obtained allocation of a $743,000 loan on July 22 to improve and extend rural telephone service in Butler, Logan, Muhlenberg, Simpson and Todd counties.

The newly-formed cooperative plans to use the loan funds to construct a modern telephone system to serve 1,663 families and other rural residents in southwestern Kentucky. The organization will purchase the Dunmor Telephone Co. and the Adairville, Auburn and Lewisburg exchanges, now being operated by the Southern Continental Telephone Co. These facilities, serving 858 subscribers over 156 miles of line, will serve as a nucleus for the new service.

About 256 miles of new line will be constructed, 136 miles of existing line rebuilt, and new dial central offices built at Adairville, Auburn and Lewisburg. The rehabilitation and new construction will make it possible for the borrower to bring improved service to the existing subscribers and to serve 805 rural families now without telephones.

Present plans include service without toll charge among all three exchange areas of the system as well as between each exchange and the towns of Russellville and Olmstead. The system, when completed, will consist of 409 miles of line.

W. Gaston Coke is president of the Logan county cooperative.

*

Udall (Kan.) Telephone Co., Inc., also on July 22 gain authority for a $153,000 initial loan to improve and extend rural telephone service in the tornado-hit area served by the company in Cowley and Summer counties.

The company plans to use part of the loan funds to replace the magneto central office which was completely demolished when the storm hit Udall on May 25, killing the operator at the switchboard. The new central office building will have automatic equipment and will also house the company's commercial office.

The remainder of the REA loan will be used to provide improved telephone service to 338 existing subscribers and initial service to 39 new subscribers over 98 miles of line, of which 69 miles will be new or rebuilt.

Although the storm completely destroyed most of the telephone facilities within the town of Udall along with about 98 per cent of the property of this com-

(Please turn to page 48)

Factors entering into a

FAIR RATE OF RETURN

By ***THOMAS A. BOYD****

IT APPEARS to be well established by the courts that a public utility is entitled to such rates as will permit it to earn a return on the value of the property, which it employs for the convenience of the public, equal to that generally being earned at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties.

Returns should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties.

This philosophy of rate-making would seem to be eminently fair, and I do not think that any utility operator would disagree with it. It is when we attempt to reduce this to dollars that we get into difficulties and differences of opinion.

Broadly speaking, utility regulation affects two groups of people—the user of the utility's services, and the investors who put their money into the enterprise. Both of these groups must be satisfied if the utility is to be successful. This point was outlined very clearly by the United States Supreme Court in the Hope Natural Gas Co. case. The majority opinion of the court, in this case, states as follows:

". . . the fixing of 'just and reasonable' rates involves a balancing of the investor and the consumer interests. Thus, we stated in the *Natural Gas Pipeline Co.* case that 'regulation does not insure that the business shall produce net revenues'. . . . But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated.

"From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock.

"By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.

"That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. . . ."

That the investor interest and consumer interest are interdependent, there is no doubt. And there is no doubt that both are equally important. Unless there is a proper balancing of each of these interest, both will suffer.

T. A. BOYD

Return Is the Balance

The proper balancing of the investor interest and consumer interest involves the fixing of a proper value of the investment in the business and the rate of return on this investment. If the investment and rate of return are set too high, the consumer pays too much for his service, and, if they are set too low, the investor will not receive an adequate return on his investment.

There is one thing that is sure, however, and that is that the investor will not go for a very long period with an inadequate return—he will pull his funds out of the business and invest them in another enterprise which he thinks will pay him an adequate return.

As far as the investor is concerned, he is perfectly free to invest his funds any way he sees fit, and he will buy the securities which, in his opinion, will give him the highest return consistent with the degree of risk he is willing to assume.

Therefore, when a utility goes into the market-place to secure additional capital, it must compete with all industries, both regulated and competitive, and, unless its securities are as attractive as those of companies with which it is competing, it will not be able to sell them.

A return, sufficient to attract the additional capital necessary to maintain an efficient and modern telephone service, is of vital importance to the owners of the company and to the users of the service.

Without adequate capital, the company cannot maintain its plant in a modern and efficient operating condition, and, ultimately, the plant will deteriorate to a point where the owners will have lost most or all of their capital and the customers will be getting telephone service not worthy of the name.

Telephone users want good telephone service and are willing to pay a fair price for it, a price which is in line with prices for other goods and serv-

*Mr. Boyd is vice president of General Telephone Corp. and he gave this address at the recent Executives' Conference of the United States Independent Telephone Association.

ices which they buy. As with other goods and services, they want their money's worth and are not satisfied to pay even a low price for poor and inadequate service.

The experience of our companies has been that, almost without exception, the protestants in rate cases have appeared, not to oppose increase in itself, but to insist that the service be improved if they are to pay a higher price for it. They are perfectly willing to pay the right price but they want full value for their money, and this is certainly a natural and reasonable stand.

Capital Depends on Earnings

The ability to attract additional capital successfully involves more than just being able to sell bonds or preferred stock or common stock. The earnings of the company should be sufficient to allow the present owners to sell bonds or preferred stock on the most economical cost basis and to permit them to raise equity money by taking additional partners into the business without diluting their own capital investment.

Any company, even with an inadequate return, can sell bonds and preferred stock at a price and to the extent that the purchasers feel that the company can pay its interest and preferred dividends.

The lower the margin of earnings over the interest and dividend requirements, the lower the price which they will pay, and sooner or later even this source of capital will dry up. This will occur when the margin of earnings is so low that further payment of interest and dividends could not be reasonably assured.

The payment of interest and dividends, and also the repayment of principal in the case of bonds and preferred stocks, are fixed as contractual obligations and are payable in the number of dollars called for by the contract.

The position of the common stockholder who bears all the risk is quite different. The value of his investment is subject to fluctuations caused by the changes in economic conditions. The earnings of his equity are in dollars of current value or purchasing power.

If the general price level has risen 100 per cent since he made his investment, then his earnings are in 50-cent dollars.

If he is allowed to earn only the same number of dollars that he earned when he made his original investment, his real return has been cut in half.

If he takes additional partners into the business, they will put in current value or 50-cent dollars, and immediately the original owner has lost a part of his capital, and his earnings on his original investment have suffered dilution.

Steps to Healthy Condition

What are the proper steps to take to avoid this capital impairment and to keep the utility in a healthy financial condition so that it can furnish satisfactory service to its customers?

In my opinion, there is no simple mathematical method of accomplishing these ends, exponents of the original cost theory to the contrary.

The solution to the problem involves the consideration of a great many factors, and, when all these factors are evaluated, the answer, in the final analysis, is a matter of judgment. I would like to give you some of my thoughts on the factors involved, beginning, first, with rate of return.

I would like to emphasize, at the outset, that "rate of return" and "cost of money" are two entirely different things. Cost of money is only one of the factors to be considered in determining a fair rate of return. Cost of money is the cost to the utility of securing capital which is customarily accomplished through the sale of debt securities and preferred and common stocks.

As to debt and preferred stock, the cost is based on the ratio of the interest or dividend which is fixed to the net amount received for the securities sold after deducting expenses of issuance. The cost of common stock money is based on the ratio of earnings on common to the net proceeds from the sale of common after deducting expenses of issuance.

The sum of the costs of these three types of securities represents the overall cost of money. This might be illustrated as follows for a typical telephone company:

	Per Cent of Total Capital	*Annual Cost*	*Total Cost of Money*
Funded Debt	45%	3.50%	1.575%
Preferred Stock	20	5.00	1.000
Common Stock Equity	35	11.00	3.850
	100%		6.425%

The cost of money of 6.425 per cent, as shown in this example, represents the "bare bones cost of money." The assumed cost of common stock equity money of 11 per cent would be the return required to induce the investor to purchase the common stock, and, in doing so, he would expect this return to be maintained.

This return to the common stockholders could not be maintained, however, unless some further allowance is made to cover contingencies such as unforeseen expenses, attrition due to the so-called regulatory lag, etc.

Also, no recognition is given for good management, nor is any leeway allowed for incentive for the stockholders to expect some improvement in return at some future time. These factors cannot be accurately measured, but allowance should be made for them in the rate of return, even though they can only be based on judgment.

Costs Analyzed

The costs of debt money and senior stock fixed dividend money are relatively simple to compute, although even this computation involves a considerable element of judgment. As to debt already outstanding, the annual cost is computed by dividing the net proceeds from the sale of the debt, which is the sales price less expenses of issuance, into the annual interest charges on the debt.

On a fixed dividend senior stock, such as a preferred stock, the cost is computed by dividing the net proceeds from the sale of the stock into the annual dividend. In addition to this historical cost of capital, it is also necessary to consider estimated costs for the capital which is to be raised in the reasonable future because it will be necessary to have earnings sufficient to cover these capital costs.

It is, of course, not possible to foresee what interest and dividend rates will be at any appreciable distance in the future so that the only practical solution is to assume that the current rates will be applicable for a reasonable period in the future. A reasonably accurate estimate of current money costs can be obtained by examining the rates for securities of comparable companies being currently sold on the market.

Computing the cost of common stock money is considerably more difficult. This is particularly true in the case of Independent telephone companies because, except in a few cases of the larger companies which have a fairly wide distribution of common stock in the hands of the public, there is no market.

It is necessary, therefore, to consider the experience of other utilities, preferably those serving in the same general territory.

If the experience of other utilities is used, it is important to remember that all of the utility industries, except for the natural gas industry, have a more stable business than does the telephone industry. Some allowance has to be made for this, and this gets down to the problem of judgment based on all of the facts.

There are a number of Independent telephone companies, probably 18 or 20, which have common stocks fairly well distributed in the hands of the public, and I believe that the experience of these companies gives a better guide, even though they are scattered throughout the country, to the cost of common stock money to Independent telephone companies than the experience of electric and gas utilities.

Two Factors Considered

In analyzing the market for common stocks, there are two factors which are usually considered—the current day-to-day market, and the prices received for stock in offerings of large blocks. The day-to-day sales on the market are in relatively small lots which, in themselves, do not disturb the price level. These day-to-day offerings alone are not a good indication of the cost of common stock money.

A better indication, in my opinion, are the offerings of additional stock in large blocks to raise new money. Assuming that all other market influences are unchanged, the offering of a large block of common stock, in order to be successful, will normally have to be offered at somewhat below the current day-to-day prices, and even the announcement of such an offering will cause the market to decline somewhat because of the immediate dilution in earnings per share resulting from the sale of additional stock.

These factors of underpricing and market pressure are important in computing the cost of common stock money, but they do not appear in the day-to-day stock prices. If the current day-to-day market is used, adjustments must be made for these factors.

The principal facts to be considered in the common stock offerings are the earnings-price ratio, the earnings-net proceeds ratio, the dividend yield, the dividend pay-out, and the capital structure of the issuing company.

The earnings-net proceeds ratio in any common stock sale is the real measure of the cost of that particular money to the company and is the earnings-price ratio less expenses of issuance.

The earnings-price ratio is affected quite materially by the dividend pay-out. The investor insists on a reasonable margin of safety in earnings over the dividend which he receives, but he is, after all, extremely interested in the dividend, and it must be reasonable in relation to earnings; or, if somewhat low, there must be an expectation of an increase to an amount satisfactory to him in the very near future.

Generally speaking, the higher the dividend pay-out, consistent, of course, with a reasonable safety margin in earnings, the higher the price the stock will bring.

Experience Best Guide

I believe that probably the best guide to the amount of dividend pay-out is experience. The average dividend pay-out for the electric industry is around 72 per cent of earnings.

Since the earnings of telephone companies are subject to wider fluctuations than those of electric companies, it would seem that the dividend pay-out on telephone companies should at least be no higher than on electric companies, and probably somewhat less.

In the case of 10 common stock offerings during the past several years of Independent telephone companies which have been quite successful in selling stock publicly, the average dividend yield on the sales price of these stocks was 6.77 per cent; the earnings-price ratio was 10.53 per cent. The dividend pay-out ranged from 53 per cent to 74 per cent, with the average about 65 per cent. The companies with the dividend pay-out of 70 per cent and 74 per cent sold their common stock issues at a better price than those with the lower pay-outs.

Capital structure is a very important factor which influences the cost of common stock money. Since the fixed investment in plant of a utility is permanent, there is no reason why this plant should not be financed to a reasonable extent permanently by debt money.

If debt forms too large a portion of the total capital, the cost of the debt will be relatively high because the risk is greater, and the cost of the equity money, both preferred and common, will be higher because of the high leverage which results in a greater risk on these stocks, both as to the safety of principal and to the chances for a continuing dividend.

On the other hand, with no debt, or a small debt, and the greater part of the capital represented by common stock, the resulting cost is also high because the common stock is the highest-priced form of capital.

There is a medium point between these two extremes which would result in the lowest cost of over-all capital. What this medium point is cannot be categorically stated because there is an area of reasonableness where a little more debt and a little less common would not result in any appreciable difference in the cost of each type of security.

For example, I believe that a bond issue which represents 40 per cent of the total capital of a utility can be sold on substantially the same basis as a bond issue which represents 35 per cent. After all, the added security of principal in the latter case is rather academic.

Then, too, there is a minimum interest yield below which purchasers of bonds, and particularly institutional purchasers, will not go, no matter how attractive the security behind the bonds, because they want at least a certain return on their investment.

Rate Increase Lag a Factor

In a number of rate cases involving Bell System companies, the commissions in recent months have based rates on a hypothetical capital structure in which they have fixed a debt ratio of 40 per cent to 45 per cent and a common stock ratio of 55 per cent to 60 per cent in order to reduce the over-all cost of money. If this is a proper procedure, then the converse should also be proper.

There have been many cases, particularly in the first few years after the war, where the demand for capital of telephone companies was so great and prices were rising so rapidly that a serious earnings lag was created because of the time required to secure rate increases. This forced many companies to provide too much of their capital by means of debt money because the earnings on the common stock were not sufficient to allow the company to sell additional stock without seriously diluting its already outstanding stock.

In a good many cases, this situation has not been corrected as yet, and, if it is ever to be corrected, it will be necessary for the commissions to base the return on a hypothetical, sound, capital structure so that the companies will have sufficient earnings to correct their capital structure.

What a sound capital structure should be is certainly a matter of opinion. In the case of Independent telephone companies, a sound structure might consist of a debt ratio of around 40 per cent to 45 per cent; and, if a preferred stock should be included, it could be about 15 per cent or 20 per cent; and the common stock equity

(Please turn to page 50)

*Mechanical Splice Closures for Telephone Cables**

During the post-war shortage of lead, new alpeth and stalpeth cable, sheathed in polyethylene, have proved excellent substitutes for traditional lead-sheathed cable in meeting urgent demands for new voiceways. But their use has been limited by the difficulty in closing a sheath that cannot be soldered and sealed by the long-established techniques used with lead sheath. This article tells how this difficulty was overcome by using an entirely new procedure, in which a die-cast aluminum casing is conveniently bolted to the cable and sealed gas-tight with a special compound.

WHEN two lengths of cable are spliced or a cable comes to an end, the sheath must be thoroughly sealed to protect the paper insulation of the cable conductors against moisture. Where, in addition, cable wires are to be connected to open wire or drop wires to customers' premises, suitable terminating arrangements must also be provided.

In the past few years there has been rapid development of greatly improved sheath closing and terminating arrangements; an important part of this development is a new method of sealing which makes water-tight and gas-tight joints with both metals and plastics and permits the design of an economical splice closure for plastic sheath cable.

The traditional way of enclosing splices in lead-covered cable has been to place a lead sleeve over the assembly of conductor joints, then to solder wipe the "beat in" ends of the sleeve to the sheath.

This procedure, which was borrowed from the plumber's art, has been standard since lead-covered cable was introduced in the early 1880's. It provides a chamber that is as moisture-tight as the sheath itself.

When World War II ended, it was soon apparent that neither the available lead supply nor the lead sheathing capacity of Western Electric would be adequate to meet the unprecedented demand for the production of cable of standard design.

As a result of considerable prewar development work by the Bell Telephone Laboratories and Western Electric on alternative types of cable sheath, together with rapid advances in the field of plastics, it became possible to increase cable production early in the postwar period by introducing alpeth sheath as a supplement to lead sheath.

Alpeth sheath comprises an inner layer of thin sheet aluminum and an outer layer of extruded polyethylene compound.

A later modification, stalpeth sheath, has an added layer of corrugated terne-coated steel strip, with its overlapping edge soldered, between the aluminum and polyethylene layers.

When the plastic sheaths entered the picture, the existing methods of enclosing splices were useless since a metal sleeve could not be soldered directly to the sheath.

Many suggestions for making a satisfactory splice closure were tried but for one reason or another most of these were found to be impractical under the varied and at times extremely adverse conditions in which the splicer must do his work.

The method which was adopted initially retained the customary lead sleeve, and required operations which, in effect, place short sections of lead sheath over the plastic at each end of the main sleeve, so that the usual solder wiped joint could be made.

In some situations, the closure can be made directly between the main lead sleeve and the plastic sheath, without the use of the supplementary sections of lead sheath.

In either case, the requisite mechanical strength and water tightness for splice protection are provided by wrappings of materials, chiefly tapes, so arranged as to insure reasonably long life under normal field conditions. Where continuous gas pressure is to be maintained in the cable, corrosion resistant clamps are placed over the wrappings to reinforce them.

While the splices made by this method have proven satisfactory, the time and cost penalties involved in making them, in comparison with the simple wiped joint used on lead sheath, have had

*Presented by P. P. Koliss of Bell Telephone Laboratories before the 1954 Signal Corps Wire and Cable Symposium at Coles Signal Laboratory on Dec. 7, 1954; based on material originally contained in an article, "A New Cable Splice Closure," by W. C. Kleinfelder published in Bell Laboratories Record, November, 1954.

Fig. 1 (above). Splicing a pair in a T-type splice closure for stalpeth cable. View shows splicing chamber, longitudinal joint seal and end seals between aluminum casing and cable sheath.

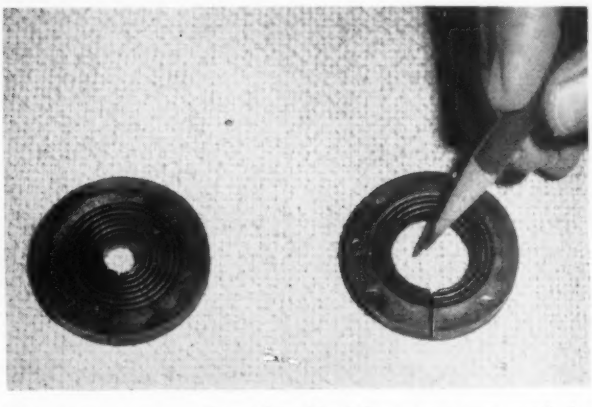

Fig. 2 (right). Plastic washer at end of stuffing box retains Butyl compound. Concentric grooves guide cutting tool so that inside diameter of washer is readily cut for snug fit on cable.

some restrictive effect on full utilization of the plastic sheath cables.

This has been particularly the case in situations where splices must be made solely to provide terminal facilities, as the actual wire splicing work in these situations is not very great and the labor cost of closing the splice is therefore proportionately greater.

An obvious way to simplify the operation would be to use a water-tight and gas-tight housing that could be easily clamped over the splice.

The idea of such a clamped housing was not new. Various commercial devices of this type had been investigated over a period of many years but experience indicated that they were deficient in one or more respects or that they possessed no marked advantage over existing designs and methods. Tests had shown that none of these could be relied upon to furnish adequate moisture protection to the cable over the many years required.

It was recognized initially that any splice closure of this type should be light in weight, as the most pressing need was for applications in the aerial distribution plant. It was decided, therefore, that the design should be based on the use of aluminum die castings.

It also became apparent early in the development work that the crux of the design problem was to establish a permanent gas-tight and water-tight seal between the cable and the housing.

Early designs involved a housing, split in half longitudinally, to be bolted together over the splice, with molded vulcanized rubber gaskets to seal the longitudinal joints and compressed rubber bushings to provide seals at the ends of the housing.

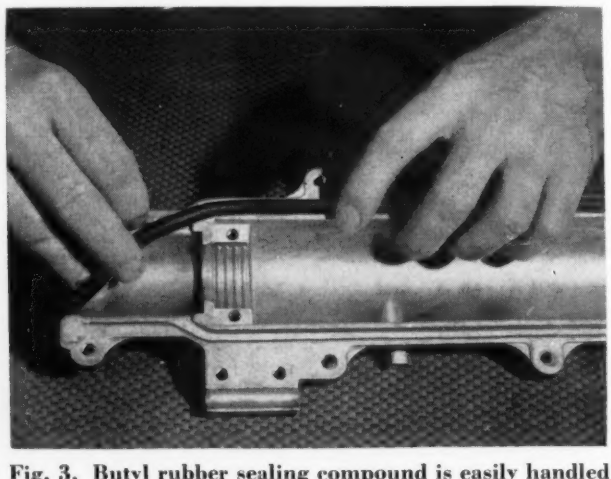

Fig. 3. Butyl rubber sealing compound is easily handled yet adheres firmly to metal.

Considerable laboratory test work, including the study of various cured rubber compounds, was expended on this basic design, and some closures using this type of seal were placed on field trial.

Experience in the laboratory and in the field made two points clear. First, if live rubber bushings were used to seal the housing to the cable, a very good initial fit would be necessary, and therefore, a considerable number of sizes of rubber bushings would be needed to care for the various sizes of cable used in the field.

Secondly, relaxation of the cable sheath and the rubber bushings due to such causes as temperature change or cold flow of materials might eventually result in loss of water-tightness. That this could occur under normal conditions of exposure was disclosed by temperature cycling tests in the laboratory and corroborated by field weathering tests at the Outside Plant Field Laboratory at Chester, N. J.

It was found that some improvement

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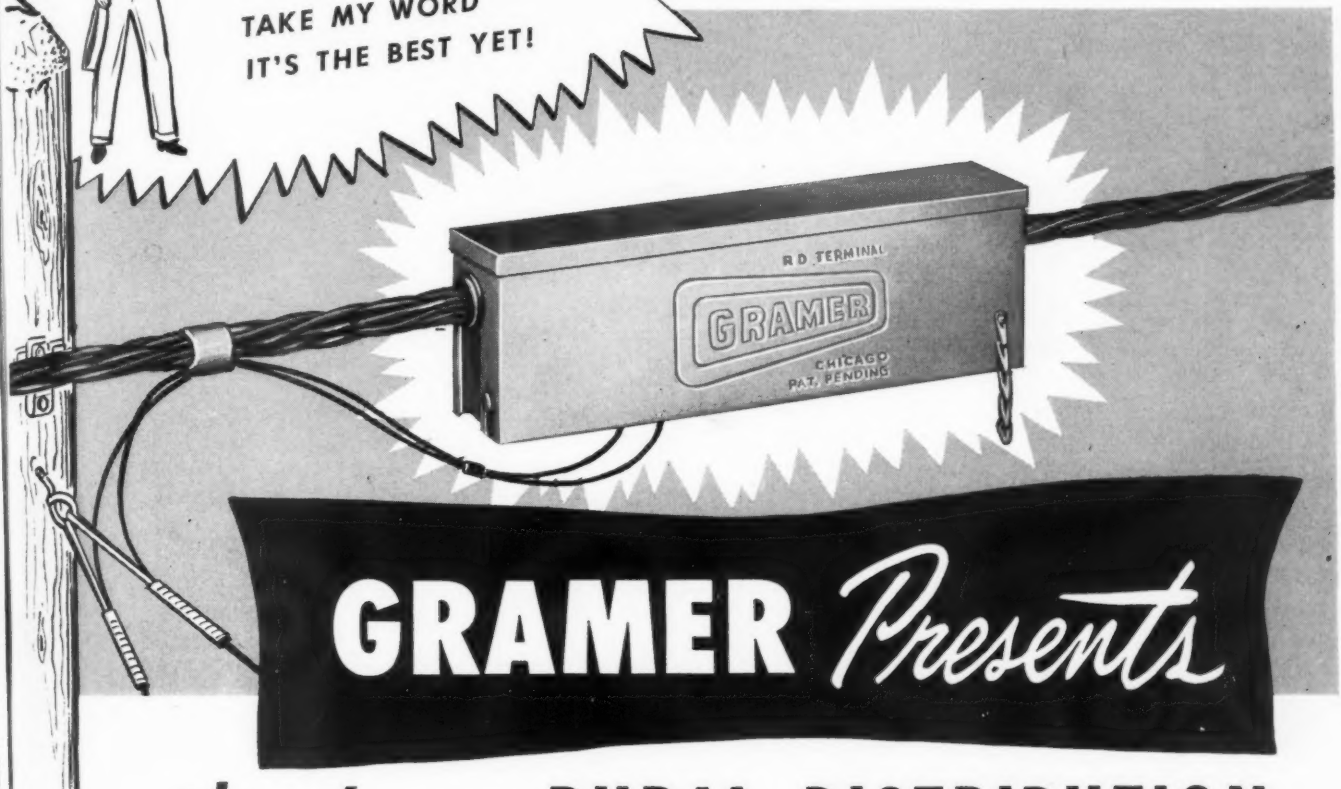

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could be obtained by introducing spring members in the sealing system to maintain the compression on the rubber, but the results did not promise adequate long-term sealing.

Since the general form and arrangement of the metallic parts of the design seemed to be approximately right, it was decided to try a radically different approach to the sealing problem. Instead of relying on continued compression of live rubber compounds for sealing, a search was undertaken for a material that would perform the needed functions by reason of its softness, deadness and ability to adhere to surrounding surfaces.

The materials engineers of the Chemical Research Department found that a compound based on uncured Butyl rubber had the desired properties. This compound is non-hardening, adheres to metal and polyethylene, has the requisite somewhat putty-like consistency and can be produced and packaged in the needed forms, in this case flat strip and round cord.

Each casting, shown in *Fig. 1*, has a chamber at the end in which the sealing material, applied in tape form and built up to the required diameter around the cable, is compressed. An "adjustable" plastic washer with concentric grooves extending partly through its thickness has been designed to center the cable and confine the sealing material in the end chamber, *Fig. 2*.

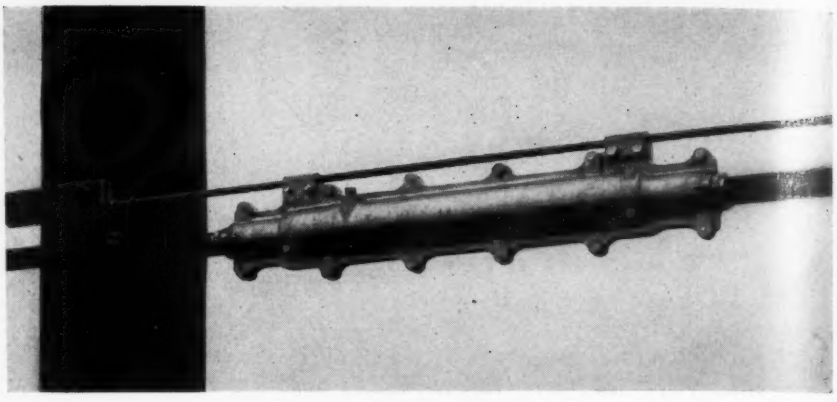


Fig. 4. Appearance of the straight splice closure with casing bolted together.

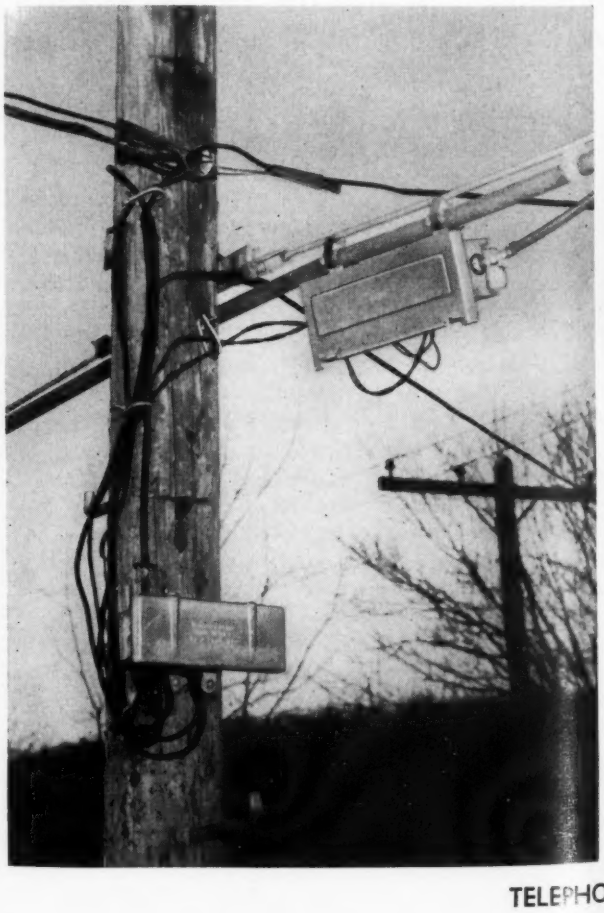
The outside diameter of this washer is just slightly less than the inside diameter of the stuffing box housing formed at each end when the two halves of the splice closure are assembled. To fit the inside diameter of the washer to the cable, it is merely necessary to cut along the proper groove with a cutting tool designed for the purpose. Enough material is thus cut away to fit the inside diameter of the washer to the cable size. The washers are slit radially so they can be slipped over the cable. Grooves in the castings extend longitudinally along each of two mating surfaces and into these grooves cords of the sealing material are laid, *Fig. 3*.

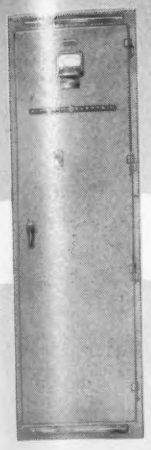
When the halves are bolted together and the compression collars are assembled and tightened at the two ends of the closure a complete seal is ac-

(Please turn to page 30)

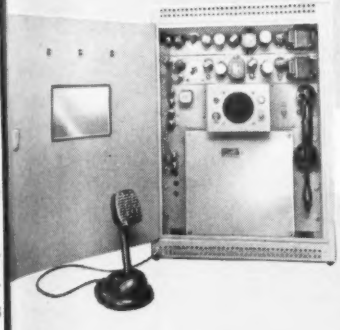
Fig. 5. Older F-type cable terminal cover raised to show faceplate and binding posts. Protectors are housed in mounting underneath.

Fig. 6. More recent NA-type cable terminal is conveniently suspended from cable strand. As with F-type terminal, protectors are mounted on pole.

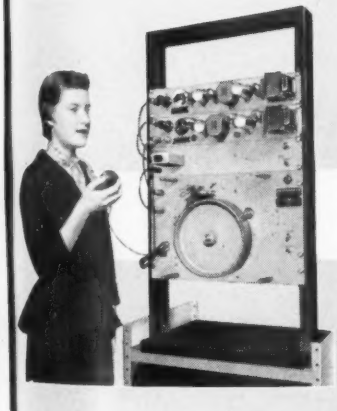




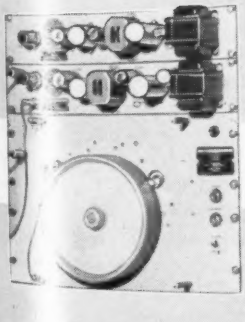
"See the First Building and Loan Company today about easy new-home savings plans. At the tone, ***The Time*** will be 4:32 and one quarter."



"***Fire*** in grain elevator at railroad yards. High-pressure truck will pick up volunteers along Front Street."



"You have dialed a ***Wrong Number***. Please look in your directory."



"***The Weather*** forecast is fair with slowly rising temperature. Low tonight, 64. High tomorrow, 78, with slight haze in afternoon."

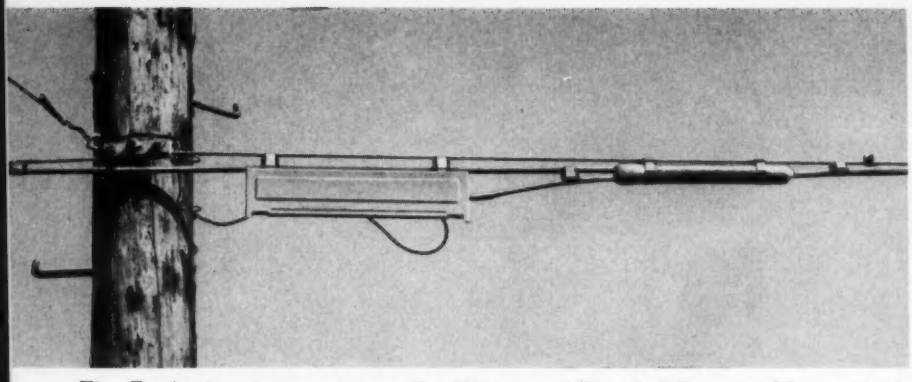


Fig. 7. An improvement over the NA-type of Fig. 6, NC-type cable terminal houses protectors too, thus eliminating separate protector mountings.

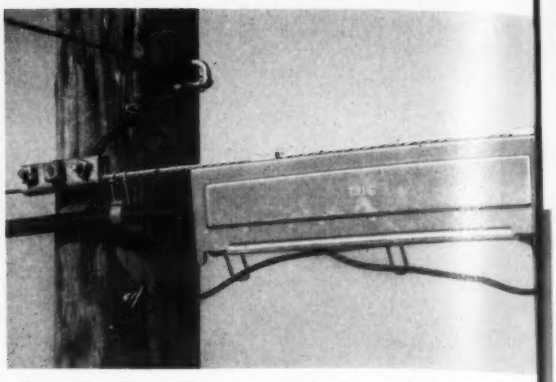


Fig. 8. New T-type terminal combines terminal, protectors and splice closure.

complished by the captive material compressed in the longitudinal grooves and the stuffing boxes at the ends, *Figs. 4* and *9*.

In addition to excluding moisture, the case must provide a means for gripping the sheaths of the cables to prevent relative motion between cable and case due to tensile or compressive forces, and to maintain across the splice the electrical continuity of the metallic portion of the sheath.

The method for doing this consists of slitting the sheaths for a short distance at each side of the splice and gripping the tabs so formed in a clamp secured by screws to the housing.

While this seal was being developed to solve the alpeth and stalpeth cable splice problem, work was also in progress to improve the terminal facilities. In the past a cable terminal has usually consisted of a faceplate with binding posts for connecting the customers' drop wires, short length of lead-covered cable whose conductors terminate on the back of the binding posts in a manner which seals the connections and the cable end against moisture, and a housing for the terminal assembly.

For many years the terminal was mounted on the pole, *Fig. 5*, and the stub cable was connected to the main cable by a bridge splice.

More recently the terminal has been hung from the cable strand, but still connected through a stub cable, as shown in *Fig. 6*. To connect the terminal into the main cable, it is necessary to bring the stub into the splice sleeve, join its conductors to the proper wires in the main cable, and include the sheath in the wiped joint as illustrated on the right of *Fig. 7*.

In addition, when terminals of these types are installed where the drop wires or cables connecting to them are exposed to high voltages, electrical protective devices have to be installed to limit the voltage appearing on the drops or cable conductors in the event of a power cross or lightning. With the older types of terminals, protection is provided in separately mounted housings, as shown in *Figs. 5* and *6*.

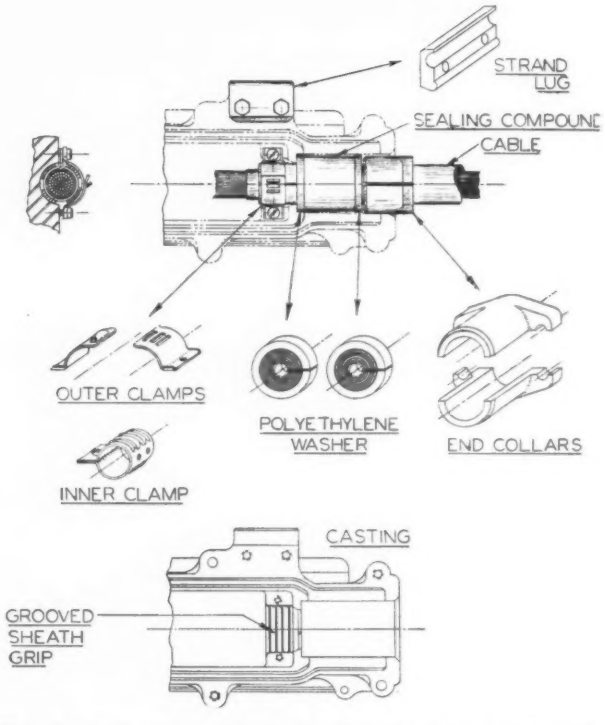


Fig. 9. "T" type terminal, details of end seal and cable sheath clamping.

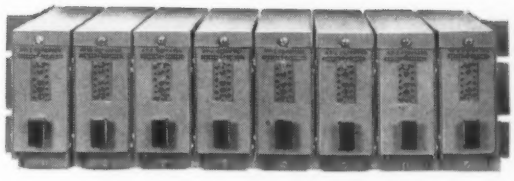
In the more modern NC terminal shown in *Fig. 7*, the protectors are mounted inside the terminal. Thus, not only is the separately mounted protector dispensed with, but the wiring between terminal and protector, *Fig. 6*, also is eliminated.

With the development of the mechanical splice closure it has become possible to combine the closure and the terminal shown in the photograph on page 23 and in *Fig. 8*. The terminal portion of this type of assembly is housed in an aluminum die casting which mates with a straight splice closure half, and in so doing forms the other half of the splice cover as shown in *Fig. 1*. The terminal half of the unit contains a cast resin block, holding the binding posts and protectors, and the terminations of the plastic-insulated leads to the binding posts are sealed within the resin block.

The block and its housing are similar to those used in the present N-type terminals, except that the leads, rather than emerging as a lead sheathed stub cable, go directly from the rear of the resin block into the splicing chamber through a gas-tight bushing in the housing.

The terminal half is made available in both 10 and 16-pair sizes. If more than 16 pairs are required to be terminated, any combination of the 10 or 16-pair terminal halves may be installed back-to-back to make 20, 26, or 32 pairs available. Either type is obtainable with or without built-in electrical protection.

(Please turn to page 51)



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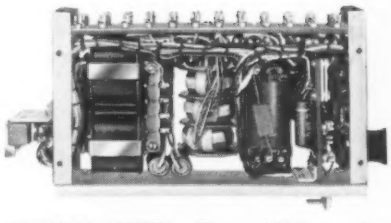
Your own employees can install Automatic's Type AT-2 Voice Frequency Repeater. No electronic training necessary. A specially-designed Installer's Set is available for quick matching of network to line.

Has Many Applications

Maximum gain is about 10 db on non-loaded cable or open wire, and from 6 to 8 db on loaded cable or wire. You can use Type AT-2 to raise transmission to toll grade, or to permit use of smaller-gauge cable on inter-office trunks, long subscriber lines, foreign exchange lines, P-B-X tie trunks, tandem and tributary trunks, centralized intercept and information trunks, loaded and non-loaded cable, and other applications.

Get Full Information Today!

Fully-tested Type AT-2 offers substantial savings you cannot overlook. Write today for new Circular 1844 which gives complete details and handy ordering data. Address: *Automatic Electric Sales Corporation, 1033 W. Van Buren St., Chicago 7. Or call HAymarket 1-4300.*

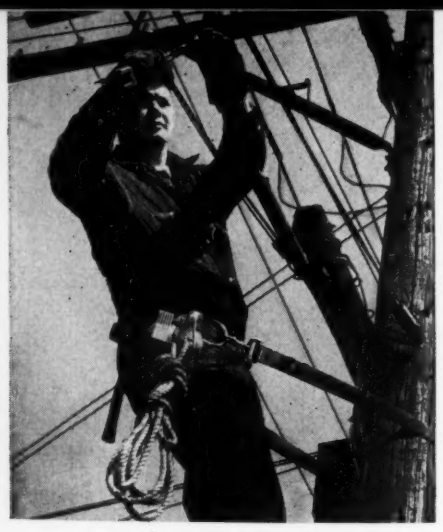


INSIDE VIEW: Type AT-2 consists of a transformer, an amplifier, and a balancing network. Operates on the principle of combined negative and positive feedback voltages. Works best at or near midpoint of line.

OVER 50 YEARS' SERVICE TO THE INDEPENDENT TELEPHONE INDUSTRY

AUTOMATIC ELECTRIC

ORIGINATORS OF THE AUTOMATIC DIAL TELEPHONE



THE Plant Man's Notebook

BY RAY BLAIN, TECHNICAL EDITOR

WE recently heard our first complaint against the new 500-type telephone. As a result of the reduced distance between the receiver and transmitter on the handset—necessary to improve transmission—the lips of the user come closer to the mouthpiece.

Some users claim that this condition might spread infection and disease.

This, we seriously doubt, however, as it has been proved conclusively in the past that microbes cannot live on a mouthpiece for a period long enough to transmit disease.

•

The Chesapeake & Potomac Telephone Co. recently installed the 1,000th outdoor public telephone booth in the nation's capital. From our observation, they are all doing a thriving business.

•

The writer recently had occasion to make an important telephone call to an old-established firm in a large city. A check was made of their letterhead, their advertising literature, and the calling cards of several of their salesmen, but no telephone number could be found.

After a slight delay, we obtained the number from information and completed the call.

We then inquired as to why they did such a good job of hiding their telephone number from out-of-town customers. It seemed that they had never thought of the difficulty people might have in calling them from a distance. They thanked us for the comment and promised that something would be done about it immediately.

We firmly believe that the telephone number will eventually be a part of the address of all business establishments.

•

It is reported that Jackie Gleason ran into trouble recently when, during a gag on his television program, he suggested viewers call a number which he pulled out of the air. Unfortunately, such a number actually existed. The telephone subscriber clocked 200 calls the first day.

We understand the matter is now in the hands of attorneys.

•

We have received a letter from Gordon Lawson, assistant to the vice president of the Hawaiian Telephone Co., in which he refers to an item that appeared on this page in the June 18 issue wherein we stated that the average telephone user is reluctant to talk to a telephone answering device. Mr. Lawson's letter states in part as follows:

"You may be interested to know that, at the present time, our company has approximately 50 electronic secretaries installed throughout the Territory. Initially, we also had the same problem. Customers were not accustomed to this new service and were reluctant to give their name and message to the electronic secretary.

"To help reduce this annoying problem and to instill some confidence in the equipment, we printed the enclosed card (see cut) for each of our subscribers. They, in turn, mailed these cards or gave them to their customers.

"We believe that this method has helped to break down the barrier, but we still are trying to devise a more effective method to acquaint the customers with this new service.

"As you can see, this card is very inexpensive, easy to distribute, and to the point."

In our opinion, Mr. Lawson and the Hawaiian Telephone Co. have a very good idea that should prove of great help in the promotion of telephone answering service. If any of our other readers have ideas on this subject, will you please write and tell us about them?

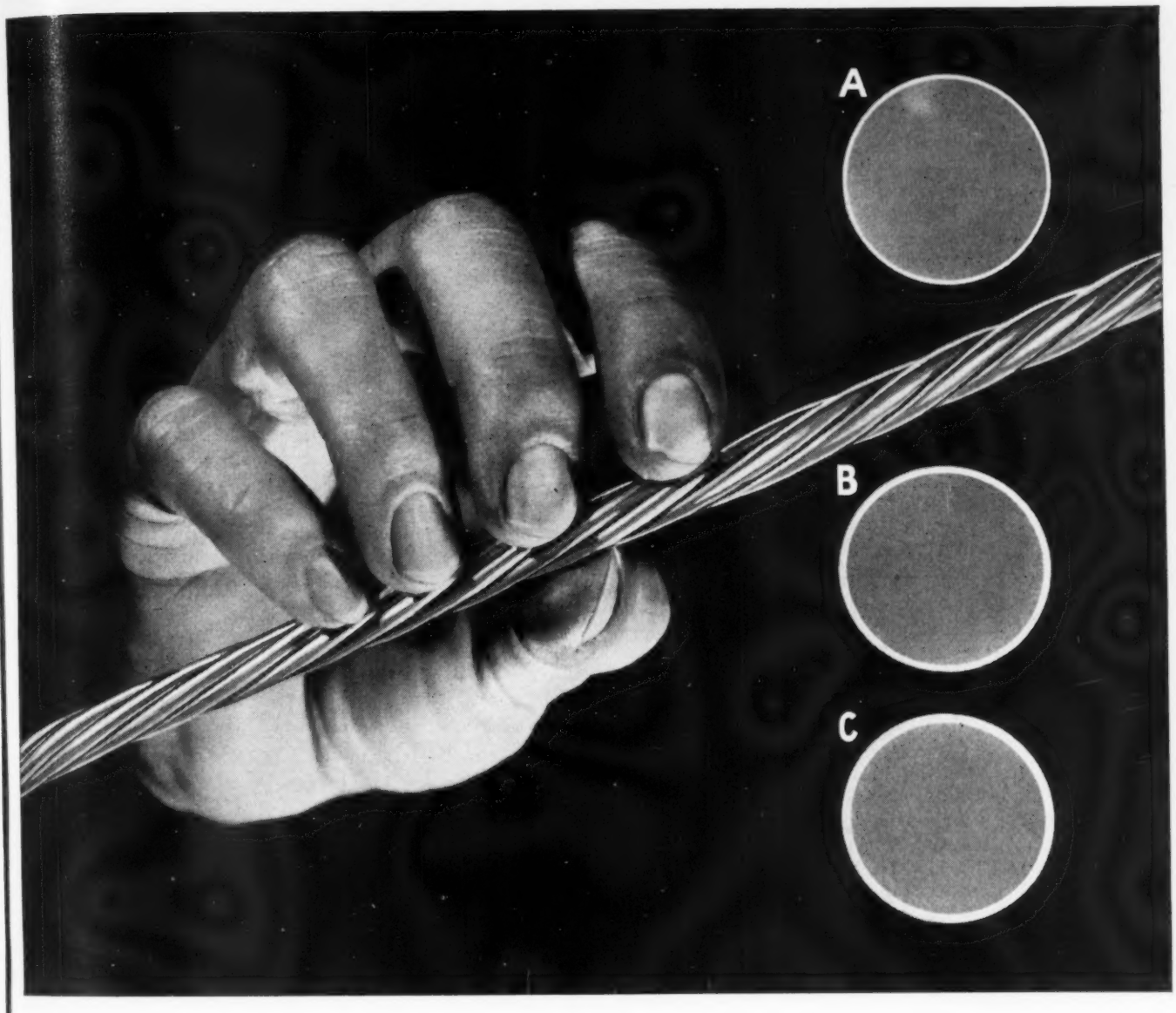
•

"Motelphone" may be a new word in our language, but it is also a welcome aid to motorists. Motel operators, always alert in finding new ways to make their service more attractive, have found that complete telephone service is the answer. Telephone service is now frequently featured in motel advertising.

The cordless switchboard is proving

(Please turn to page 36)

For your convenience we now subscribe to Hawaiian Telephone Company's automatic 24-hour telephone answering service.
While we are out our Electronic Secretary will answer the telephone, and will faithfully give us your messages when we return. Please make use of this new service and be sure to leave your name and telephone number with "her" when you call.
HAWAIIAN ELECTRONICS SERVICE
Telephone 92-8015
LEILANI THE ELECTRONIC SECRETARY



Strand Lives Longer When Rust Stays Out

The life-span of your strand depends heavily upon the coating that shields the ferrous wires. The better this jacket holds up, the less chance there is for rust to gain a foothold. That's why Bethlehem went all out, nearly 20 years ago, to develop a coating that would really *protect* against rust.

The development work resulted in the *bethanized* coating, which has stood the test of time.

Applied electrolytically, this zinc armor is so pure, so uniform and ductile, that it will not crack or peel even under repeated bending. It offers no tiny crevices or "checks" in which rust can get started. It keeps corrosive atmosphere completely away from the wires.

But there's another big advantage to specifying Bethlehem strand with the bethanized coating. This coating is available in three different weights, making possible a choice for every field condition. The lightest, coating A, is the thickness of extra-galvanized. Coating B is twice as thick as A; coating C, three times as thick as A. All meet standard ASTM specifications.

For the long-term jobs, the two heavier coatings are especially recommended. Actually, they cost little more than the A-weight; but under parallel conditions they last much longer. They're a real "buy."

Full details about Bethlehem strand are available at our nearest sales office. If you will call or write us, we'll gladly see that you receive complete information.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM STEEL

BETHLEHEM STEEL

popular in motels with a telephone in each motel unit.

Colored sets, too, are proving extremely popular because they blend well into the decorative schemes of the new $10,000-and-up modern motel units.

A telephone in each unit brings the motel customers more than the ordinary telephone convenience. It actually converts the motel into an office away from home for the commercial traveler. It also permits him to make and confirm appointments in privacy.

He can also spread out the contents of his brief case for easy reference—which is always better than a one-man wrestling match inside a public telephone booth.

The intercommunication feature also proves an advantage. He can call the motel office for information or service.

Out-of-town listings are also becoming more and more important to motel operators. Motels and motel customers are taking advantage of the out-of-town listings in the yellow pages of the telephone directory. It is easy and convenient for customers to telephone ahead and make reservations for their next night's lodging.

Some motel chains issue directories listing the address and telephone numbers of all motels in their system. The advantage of this practice is appreciated after a motor traveler has had to drive till near-midnight in order to locate proper lodging.

When a telephone reservation is made ahead, one can laugh at "No vacancy" signs.

•

Numbers on toll lines are now being installed at pole tops so that they may be seen from an airplane or helicopter on an aerial survey. The mile post markers along some new oil pipe lines are also tilted so that they are visible for aerial inspection.

All this would make it appear that we are actually living in the air age.

•

The Bell System in the United States and Canada has just purchased for its motor vehicle fleet the 100,000th car or truck since the end of World War II. The cost of these vehicles is about 225 million dollars. Of these 100,000 purchases, about 44,000 cars and trucks were additions to the great green fleet while 56,000 served to replace vehicles worn out in service.

•

It has been said that the difference between in-laws and outlaws is that the in-laws promise to pay it back.

Plant Man's QUIZ

BY RAY BLAIN, TECHNICAL EDITOR

Q. What type of ventilator is recommended for use in a manhole in which bad air and gas are expected?

A. In our opinion, the use of the gasoline engine blower has proved highly satisfactory. Some of these blowers circulate over 800 cubic feet of air per minute, which proves ample under ordinary conditions.

We also prefer the type that makes use of an 8-inch diameter hose about 15 feet long in order that the fresh air may be conducted directly into the low spots and provide full circulation through the manhole.

•

Q. Will it be possible to provide equipment for a conference circuit on a small manual PBX switchboard?

A. Yes, and we suggest that you inquire of the manufacturer of your switchboard as to the equipment you will require. Ordinarily, as many as five local stations may be arranged for conference purposes. Or as many as four conversations may take place between the PBX stations and a trunk line.

•

Q. Should the gaffs on a lineman's climbers be sharpened when they wear and become dull?

A. The gaffs of linemen's climbers should be kept sharp at all times. When resharpening a gaff, care should be exercised, however, in order to maintain its original shape as nearly as possible.

In this connection, a gaff gauge should be used to make sure that proper shape is maintained after sharpening.

•

Q. In the interest of safety, is it considered desirable to install safety seat belts in telephone installation and construction trucks?

A. We are advised by the safety people that an amazingly large percentage of the crippling traffic injuries and deaths may be avoided through the use of safety seat belts. The elimination of just one crippling injury would more than pay for the installation of seat belts in all vehicles of the average operating company.

Seat belts for cars and trucks and automobiles are available at a reasonable cost. The entire belt assembly, including the floor hardware, is designed to test in excess of 4,000 pounds.

This is far in excess of the present CAA-rated strength for airplane seat belts. This belt is also light and comfortable and will fit any person, and any seat in any car or truck.

The webbing is 100 per cent nylon, shock-absorbing, neoprene impregnated, harmonizing gray in color, very long wearing and easy to keep clean.

A shoulder strap may be readily attached to the lap belt to provide added protection. This feature is highly desirable to provide face protection.

The floor hardware for this belt includes steel reinforcing plates which are attached securely to the floor of the vehicle instead of the seat. This arrangement affords much greater protection in the event of a serious accident.

In our opinion, it would prove highly desirable to install seat belts in all telephone vehicles. We believe that this is a good idea despite the fact that telephone people are usually considered very good drivers.

•

Q. When a lineman must use a chisel or punch, mashed fingers and skinned hands sometimes result. Is there any method by which this operation may be made comparatively safe?

A. It is suggested that you consider using a tool known as a chisel grip. This is a device designed for holding safely, chisels, star drills, punches, gouges, ground rods, marking dies, etc.

This tool consists of a 6-inch handle that grips any size of chisel up to 1¼ inches. An 18-inch model is also available for holding tools up to 2¾ inches.

This tool is for two-man operation when a sledge is used instead of a hammer.

"YOU'RE TELLING ME!"

"That's a funny one. You telling me what a great thing the telephone is. As if I didn't know!

"Why, I'm one of the main reasons we have telephones in our house. For you can bet your life I keep the folks pretty busy around here.

"Just think! If we didn't have a telephone, Grandma couldn't call up to ask if I had a tooth. And Daddy couldn't talk to us when he's out of town. We couldn't order things in a hurry from the stores. And Mother would be tied down just something awful.

"And suppose one of us suddenly took sick? Or there was a fire? Or a robber, maybe? Well, I don't worry about those things when I see the telephone.

" 'Doesn't cost much either,' my Daddy says. And Mother says, 'I don't know what I'd do without it.' "

BELL TELEPHONE SYSTEM

THE Operator's Corner

By MAYME WORKMAN — TRAFFIC EDITOR

THIS IS the season of the year when it takes real effort and stamina for operators to keep that smile in their voices and to remain calm and unruffled when customers are edgy because of discomfort due to the hot weather.

Operators working in air-conditioned offices are the fortunate ones. But while managers, generally speaking, are anxious to make the operators' quarters as comfortable as possible, especially during the summer months, many telephone companies are not financially able to install air-conditioning equipment. It is costly, particularly in larger offices.

In a recent conversation with a traffic representative from one of our large Illinois exchanges he stated it would cost his company a half million dollars to install air-conditioning in their building. Think of the completed long distance calls it would take for such an outlay!

No matter how great a company's desire may be to install every device for their employes' comfort, they must be practical, too, and stay within their budget for such expenditures.

There is a saying, "All things come to those who wait," and no doubt some day this will be true of air-conditioning. In the meantime it is an excellent idea to accept a situation as it is and not as we would like to have it be until it can be adjusted.

It is useless to fret about a condition which we cannot change. It is better to be happy with what we have.

The happiest people are those who accept life as they find it and make the best of any situation. Wishing things were different and regretting how things are is a waste of time and energy.

It is better to enjoy life today than to pin our hopes on some vague tomorrow. Even the poorest life in this great country of ours is a good life, free from persecution, and with high standards of living. The comfort and joy of our many inventions make life in America better than the life of kings of old.

Assuming a realistic attitude toward life will go a long way in keeping folks happy. What if your features are not perfect, your feet too large or your arms too short?

Instead of fretting about it, why not say, "This is the way I am. This in the way things are. This is what I have. These are my limitations." Then go right on from there to make life interesting and worthwhile today. Any person with such a realistic attitude can be a happier person and make others happier, too. Happy people do the best they can with what they have. Dissatisfied people sit back and figure out what they would do if they only had what they haven't.

I just returned from the beauty parlor. I knew before I went that I would have to sit under the dryer for more than an hour. You know what that is on a hot day.

I was tired, so I just relaxed and took a good nap. And before I realized it, the time was up and I was ready to be combed and on my way.

I could have fretted while I was under the dryer, which would not have helped matters. But the good nap I enjoyed was really refreshing, so here I am, back on the job enjoying my work.

Everyone has a desire to be happy but many fail to realize that the greatest happiness is achieved by making others happy. A kind word, a smile, a clasp of the hand, a word of praise, just little things, it is true, but of such, happiness is made.

I am reminded of a verse I read recently which impressed me very much. It reflects love, charity and tolerance. Perhaps you would enjoy reading it, too. It is called:

Daily Creed

Let me be a little kinder,
Let me be a little blinder
To the faults of those about me;
Let me praise a little more,
Let me be, when I am weary,
Just a little bit more cheery,
Let me serve a little better
Those that I am striving for.
Let me be a little braver
When temptation bids me waver,
Let me strive a little harder
To be all that I should be.
Let me be a little meeker
With the person who is weaker,
Let me think more of my neighbor
And a little less of me.

The "Daily Creed" could well be termed "The Operator's Creed," because it embraces so many of the things she can do in her work at the switchboard, and in her contacts with her co-workers. We can all be a little kinder, and surely we can be a little blinder, to another operator's error.

Praise a little more? Of course we can, when it is merited. A word of praise does so much for an operator, particularly for a novice in the business.

It isn't always easy, but haven't there been times when we could have been a little more cheery when we are weary, instead of being cross and irritable. In our business, those we are striving for are our customers and we can serve them better by putting forth a little extra effort. When we are tempted to pass up a responsibility (particularly when it is not to our liking, we can strive a little harder and get the task done.

We can all be a little more meek at times—more tolerant with others who are not as capable perhaps, or who find the accomplishment of their tasks more difficult.

By thinking more of our neighbor and a little less of "me," our unselfish attitude will bring its own reward in peace and satisfaction. This, too, can be applied to our daily tasks. By being on time to relieve an operator who has

(Please turn to page 43)

"If it's electrical ...it's here"

All over the world, business men know they can get anything and everything in communications and electrical equipment from ISE, associate of International Telephone and Telegraph Corporation. For nearly three-quarters of a century ISE—now representing 33 IT&T manufacturing associates located in 19 countries, as well as many other leading manufacturers—has been supplying the finest in electrical components, equipment, and systems.

Whatever your needs—friction tape or far-flung microwave systems—ISE offers convenient, single-source service. This includes material supply and system installation. For extra convenience ISE's complete Engineering Service is available for the survey, planning, and design of telecommunication projects ranging from a single radio transmitter to complete telephone, telegraph, and airport installations.

FACTORIES IN SOUTH AMERICA: Cia Standard Elec. Argentina, S. A. Ind. y Com., Buenos Aires, Argentina • Standard Electrica, S. A., Rio de Janeiro and São Paulo, Brazil • Cia. Standard Electric, S. A. C., Santiago, Chile.

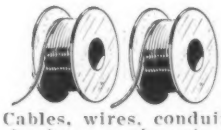
ISE — An IT&T Associate

International Standard Electric Corporation

WORLD WIDE EXPORT DISTRIBUTORS

***Export Department*, 50 Church St., New York 7, N. Y., U. S. A.**

Central telephone exchange equipment for installations of any size, automatic or manual.



Cables, wires, conduits, structures—equipment and supplies for every communication and power need.

Radio aids to air navigation . . . complete airport communications and lighting systems.

Teleprinters for automatic transmission and reception of written messages.

All equipment for television and radio broadcasting and receiving . . . point-to-point communication.

construction and maintenance DIGEST

- Able cable
- Hold down line costs
- Die-hard battery
- Stubbornest anchor
- Guard 10 lines

Published every week to help you get the most out of your materials and supplies dollar

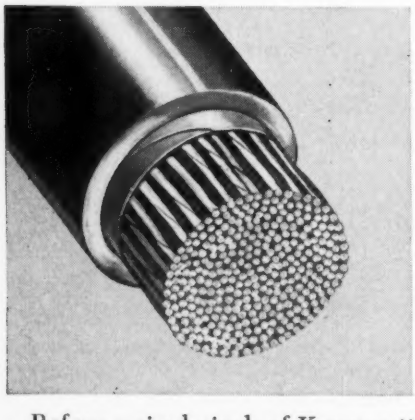
by C. J. Reynolds, Stromberg-Carlson Company

The few dollars you spend on *reliable* equipment today will be repaid a hundredfold in lower maintenance costs for years to come. Protect your investment with the double guarantee offered by Stromberg-Carlson. First, leading manufacturers build this equipment, and guarantee it. Second, because we recommend and sell this equipment to the telephone industry, we *also* guarantee its performance!

Uniformity, Dependability, Lasting Service

When you've said that about cable you've covered about everything.

Kennecott Telephone Cable fills the bill in uniformity, dependability, lasting service for our telephone cable customers.



Before a single inch of Kennecott cable leaves the mill, it is tested for Dielectric Strength, Insulation Resistance, Conductor Resistance, Capacitance and Fixed Dimensions. Such care in manufacture is your warranty of efficient, trouble-free performance in the field.

Specify Kennecott — distributed by Stromberg-Carlson.

How to keep your costs from climbing too much

In our picture, you can see a bunch of "roughnecks" that can save you money on maintenance.

These are installation insulators, built to a standard that lets you install them and forget them. Your linemen will be able to spend their time more profitably, because they'll be spending **less** time on insulator replacement.

These rugged porcelain insulators are available in a full line of shapes and sizes.

These insulators are made of highest quality dry-process electrical porcelain by Porcelain Products, Inc., who have specialized in serving the telephone industry for many decades.

Protect yourself from battery failures

You can use Exide Manchex Batteries for central office and private branch exchange equipment, and be sure you'll get a supply of power when you need it. These batteries have been proven daily in exchanges of every size, and for 67 years Exide Batteries have been serving the telephone industry.

The manchester positive plate with its exclusive button-type construction provides exceptionally

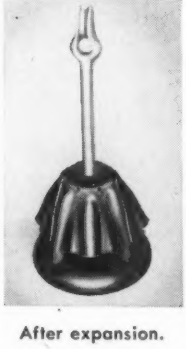
Old age, even high discharge rates, have little effect on this battery.

long life. Latest developments on molded glass jars permit compact space-saving installation.

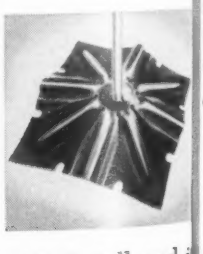
Heavy terminal posts with copper inserts provide extra conductivity for sustained voltage at high discharge rates.

Best way to anchor guy wires

A guy-wire anchor has to do many things for you. It must hold the guy firmly in place, by getting a strong grip on the soil it's planted in.



8-Way anchor before installation.



After expansion.

It must be easy to install, and it must have plenty of underground surface to hold it in place.

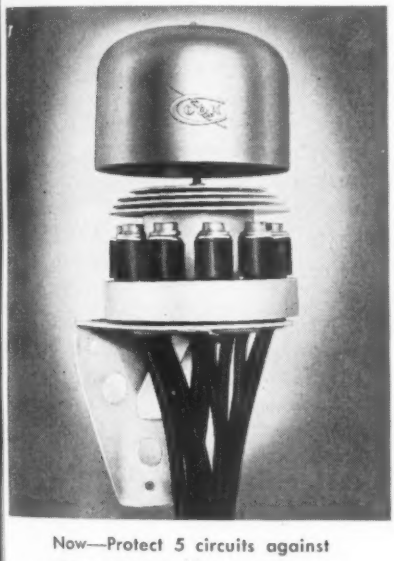
You can expand the Chance 8-

Way expanding anchor with only eight or nine sharp blows. Its eight plates open to a full width that puts as much as 63% of the anchor under undisturbed earth. The guy load is distributed evenly over all of these blades, for maximum holding power.

There is no waste space between blades—when expanded, the anchor forms a complete pyramid-shaped square, providing a strong foothold. Sizes from 60 to 200 sq. in. in area.

The new 5 circuit
Hy-Cap Power Cross Protector

Whenever telephones are in joint occupancy with power lines, a heavy-duty protector should protect the telephone lines against destructive power cross.



Now—Protect 5 circuits against power crosses with one protector.

Such protection can now be had when the Cook Electric Company's Hy-Cap 5 Pair Power Cross Protector is installed. This unit mounts on a type 10B cross-arm and will protect 10 lines. Connections are made with pre-cut No. 10 plastic insulated copper wires which terminate on rugged discharge carbons. There is just one ground wire for easier installation. The protector will break down at 3000 volts and will continue to ground the fault current as long as it exists.

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worked her tour, we are thinking more of our neighbor and less of "me." There are so many things to which this can be applied.

If we take the Daily Creed seriously, each of us can find something to work on to improve ourselves and to develop the personality we all desire.

Traffic Questions

(1) Why is it necessary to take peg counts?

(2) When should the phrase "You're welcome," be used?

(3) If a customer has a decided accent or is otherwise difficult to understand, may ordinary phrases be discarded and may colloquialisms be used to make yourself understood?

(4) When it becomes apparent that a customer has encountered a service difficulty, should his call be given prompt and individual attention until the situation has been adequately met?

(5) When you recognize an emergency call, what phrase should be used to indicate to the calling party that you have recognized his call as such?

Answers are presented on page 51.

Carolina T&T to Provide Second TV Network

A twist of a dial will bring a new television station with its NBC network hookup to eastern North Carolina's television audience in September contingent only on the construction of the television station's transmitting tower and building at Grifton and the installation of the necessary equipment.

This was announced on Aug. 3 by an official of Carolina Telephone & Telegraph Co., Tarboro, N. C., who added that the telephone company was proceeding according to schedule with its plans to provide network facilities for the new television station.

The video, or picture portion, of network programs will be transmitted from the telephone company's 318-foot microwave tower at Castoria, near Snow Hill, for a distance of some 20 miles to the transmitting tower of WITN located at Grifton. The Castoria tower was constructed in 1953 for the provision of network facilities for WNCT at Greenville.

Microwave signals from the Castoria tower will strike a reflector mounted some 180 feet up on the WITN transmitting tower and be directed to an 8-foot saucer-shaped disc at the bottom of the tower. Microwave signals from this disc will in turn be funneled into the transmitting station to be radiated out through the transmitting tower to the television sets of eastern North Carolina.

The Castoria tower will receive the microwave signals from a series of similar towers beginning at Westover, near Raleigh, where contact will be made with national network facilities. These microwave towers, located at 20 to 25-mile intervals, act as booster stations and relay the television signals from one tower to the next until they arrive at their destination.

The towers which will transmit the video (picture) to WITN are located near Westover, Smithfield, Goldsboro and at Castoria.

While the network pictures will be transmitted by microwave, the audio, or sound, will be transmitted over land lines provided by the telephone companies.

Carolina T&T will provide the land line facilities from Goldsboro to Grifton while American Telephone & Telegraph Co. will deliver network audio to Goldsboro from the main North-South network facilities.

Existing cable from the exchange at Grifton will be extended by the Carolina company to carry the last lap of the audio link to the transmitter site located some 2 miles out of Grifton on the Vanceboro highway.

WITN studios and offices are at Washington.

Bell Launches Campaign To "Save that Cable"

Bell Telephone Co. of Canada reports claims against people digging up or otherwise damaging its underground cables came to $200,000 in 1954. Insurance companies are getting concerned about it, and may raise premiums or deductible amounts, comments the *Financial Post* of Toronto. They may even refuse to insure some contractors whose records aren't good.

Bell has launched an educational campaign. "Give us a break—instead of our cables," says a booklet. "Before you dig, call Telephone Repair Service," says a sticker that goes handily onto a bulldozer or other construction machine.

In June long distance service was almost completely interrupted between Montreal and most points east when a main underground cable was damaged by a power shovel. It took two and a half hours to restore service. There were 700 cases of damage last year, and it's about as bad this year.

The warning applies to household tools too: setting a sapling tree in a lawn can sometimes knock out telephone service for hundreds of users.

Courts and Commissions

Ohio Independent Secures $16,000 Rate Increase

Effective Aug. 1, rates of about 5,000 subscribers of the Shelby Telephone Co. were increased a total of $16,000 a year under a new schedule approved by the Ohio Public Utilities Commission. The Shelby company had requested increases approaching $20,526 annually. The last rate increase was secured by the company four years ago.

Approved one-party residence rates, which were $3.50, are now $4.35.

AT&T Files $650,000,000 Debenture Issue with SEC

The American Telephone & Telegraph Co. announced on Aug. 2 that it is filing a registration statement with the Securities & Exchange Commission covering a proposed offer of convertible debentures to share owners in an amount not to exceed 650 million dollars. This proposed financing was approved by the share owners at the company's annual meeting last April.

The timing and terms of the issue, including the maturity, interest rate, and price for conversion of the debentures into shares of capital stock, will be fixed by the board of directors at a later date. As soon as the directors act, an announcement letter will be sent to share owners.

The funds which will be obtained are needed to construct additional facilities to meet continuing demands for telephone service.

Rules to Protect Exchange Area Boundaries in N. C.

Although admitting that residents of some rural areas have a greater interest in one town than in another, the North Carolina Utilities Commission on Aug. 4 set a policy in which it states that "personal desires and conveniences of the petitioners must yield to the orderly establishment of telephone service designed for the best interests of the community as a whole."

"In establishing telephone service in the rural areas of North Carolina, it is essential," it said, "that there be a firm policy for the designation of exchange areas and territories. Due care should be exercised in establishing such, but once a determination is made it is vital that the boundary lines . . . be strictly adhered to."

The commission observed that there invariably will be some individuals located within an area who have greater needs and more compelling interests in some other center of population than that to which their exchange is connected. This is unfortunate for the individuals involved but it is a situation that cannot be helped. The commission added:

"If it became the policy of telephone companies to connect every subscriber to the exchange which best fitted his personal convenience and desires, there would be a criss-cross of telephone lines, a duplication of telephone facilities and a general conglomeration of intermingled service which would break down all order and system . . . and would be detrimental . . . to the entire citizenship of the state."

The policy was stated in a case in which 15 residents of Reidsville, now served by Southern Bell Telephone & Telegraph Co.'s Monticello exchange, had petitioned for service from Southern Bell's Reidsville exchange on the grounds that they have closer ties with Reidsville than Monticello and should be included in the Reidsville exchange area. Southern Bell contended, however, that the community was connected with Monticello following a careful survey and most of the residents had wanted service from Monticello exchange, which includes toll-free connections with Greensboro and Summerfield.

In ruling on the matter, the commission said that the people of the area had been given their choice and "by an overwhelming majority they chose their county seat, the city of Greensboro, which incidentally automatically allowed them another connection with a large rural community in Guilford County served by the Summerfield exchange." To make an exception for 12 or 15 persons at Reidsville, would seem reasonable but making an exception would mean that there soon would be no fixed policy.

Two Illinois Independents Protest Sale to Bell

The Fall Creek-Payson Telephone Co., and the Bluff Hall-Payson Telephone Co. recently filed an appeal in the circuit court, Quincy, Ill., against a decision of the Illinois Commerce Commission on June 8 ordering the Payson Telephone Exchange sold to the Illinois Bell Telephone Co. The commission and the Payson Farmers' Telephone Co. were named defendants.

A second appeal against the decision has been filed by the Payson Farmers' Telephone Co. against the Illinois Commerce Commission. Max Weinberg, attorney for the Adams Telephone Cooperative, who filed the appeals, said both were necessary because two-thirds of the objectors are involved in the first appeal, and the other third are members of the Payson Farmers' telephone company.

The two cases involve 420 telephone stations. A petition was filed with the commission requesting that the Payson Telephone Exchange be sold to Adams Telephone Cooperative. The Illinois Bell Telephone Co. also asked to acquire the exchange.

A number of hearings were held by the commission, which later directed the exchange to be sold to Bell, and denied the request that it be sold to the Adams Telephone Cooperative.

Carolina T&T Stock Price Case Heard by High Court

The North Carolina Supreme Court on Aug. 5 again was asked to decide whether the North Carolina Utilities Commission has the authority to require the Carolina Telephone & Telegraph Co., Tarboro, to set a price of $125 on stock it proposes to sell to present stockholders.

It is the second time that the case has been before the court, the appeal this time being filed by the commission. When the company took the matter to the courts several months ago the supreme court ruled that the commission would have to make specific findings of fact as to why it required the company to sell the stock at a price above its $100 par value.

The company wants to sell the stock at par, and after the case was returned to the commission, the body, after further hearings, again issued an order authorizing the stock issue but setting the price at $125. The company appealed again and Superior Court Judge Quincy K. Nimocks ruled that the commission had not made "specific and definite findings of fact" as required by the supreme court.

Judge Nimocks held that the price of stock sold to the public was not involved, and that offering the stock to the present stockholders at par value, even though the figure is below its market price, "is not found to threaten harm to the public."

The commission appealed from Judge Nimocks' order that the price requirement be eliminated.

Carolina T&T is seeking to sell 66,640 shares of stock at $100 per share to present stockholders at the rate of one share for five each now held. The proposal has been pending for several months while the controversy over the stock has been carried on.

Texas Independent Gains Increase in Rates

An application from the Navasota (Tex.) Telephone Co. seeking a 25 and 50 cent rate increase was granted recently.

James F. Martin, owner of the company, and George Franks, manager, pointed out three reasons why it was necessary to ask for a raise. The reasons are "(1) gradual increase in the cost of labor and materials; (2) the necessity for increasing the central office equipment to improve service, and (3) the necessity for expanding cable facilities and upgrading service."

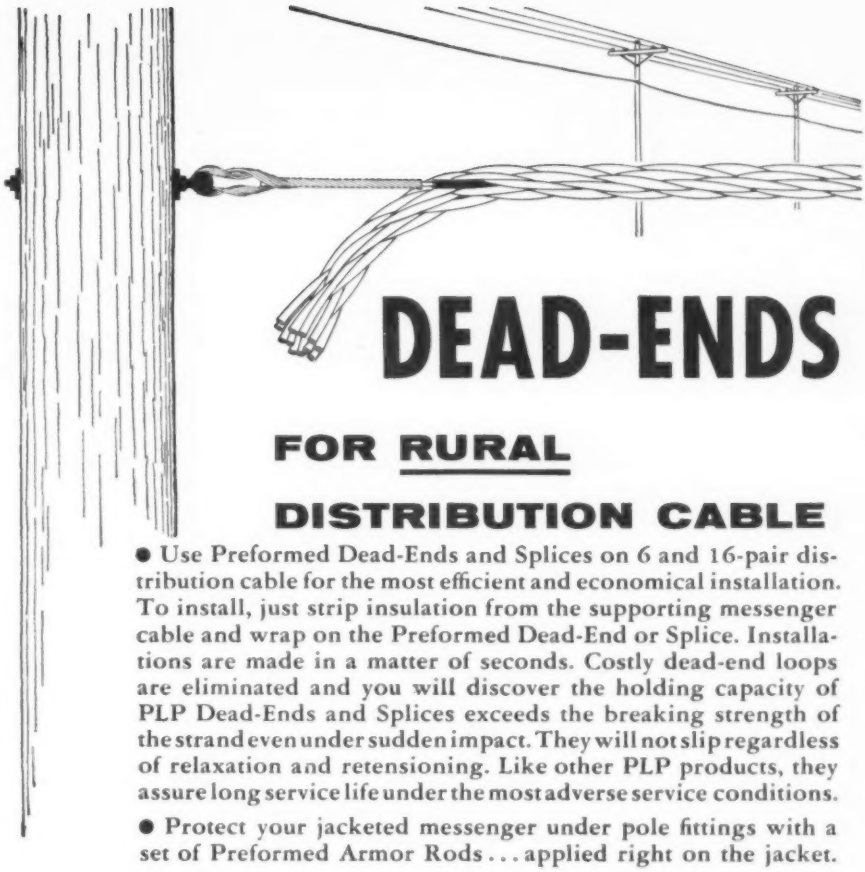
The last rate increase granted the telephone company was in 1952 when they installed the automatic system giving Navasota up-to-date service.

According to the application the following rate increases will raise the company's gross income by $390 per month. The increases are as follows:

One-party business, $7.75 to $8.00.
Two-party business, $5.50 to $5.75.
Four-party business, $4.50 to $4.75.
One-party residence, $4.25 to $4.50.
Two-party residence, $3.25 to $3.75.
Four-party residence, $2.50 to $3.00.

General of Indiana Buys Independent

The Klondike Telephone Co., Wakarusa, has been sold to the General Telephone Co. of Indiana, Lafayette, which was to have begun operation of the exchange after Aug. 1, pending approval



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● Use Preformed Dead-Ends and Splices on 6 and 16-pair distribution cable for the most efficient and economical installation. To install, just strip insulation from the supporting messenger cable and wrap on the Preformed Dead-End or Splice. Installations are made in a matter of seconds. Costly dead-end loops are eliminated and you will discover the holding capacity of PLP Dead-Ends and Splices exceeds the breaking strength of the strand even under sudden impact. They will not slip regardless of relaxation and retensioning. Like other PLP products, they assure long service life under the most adverse service conditions.

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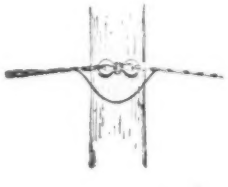

PREFORMED DEAD-ENDS AND TANGENT SUPPORTS

● Protect and hold new self-supporting cable with a firm elongated grip that distributes a low unit pressure over a large area . . . that eliminates damage to the conductor without permitting slippage.

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● Assure the fastest, most economical and efficient means for dead-ending guy strand and messenger . . . do not slip under any condition—impact or intermittent loading. They are wrapped on the strand by hand without the aid of wrenches or compression tools. Easily removed for retensioning.

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PREFORMED LINE GUARDS

● Fit snugly without the use of clamps or clips. They guard against concentrated stresses and are ideal for protecting conductors from the abrasion by trees, buildings or other objects. A must for protection at tangent supports.

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● Reinforce the conductor and provide protection during the life of the line . . . eliminate wear and chafing, resist slippage and greatly reduce maintenance.

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S&G

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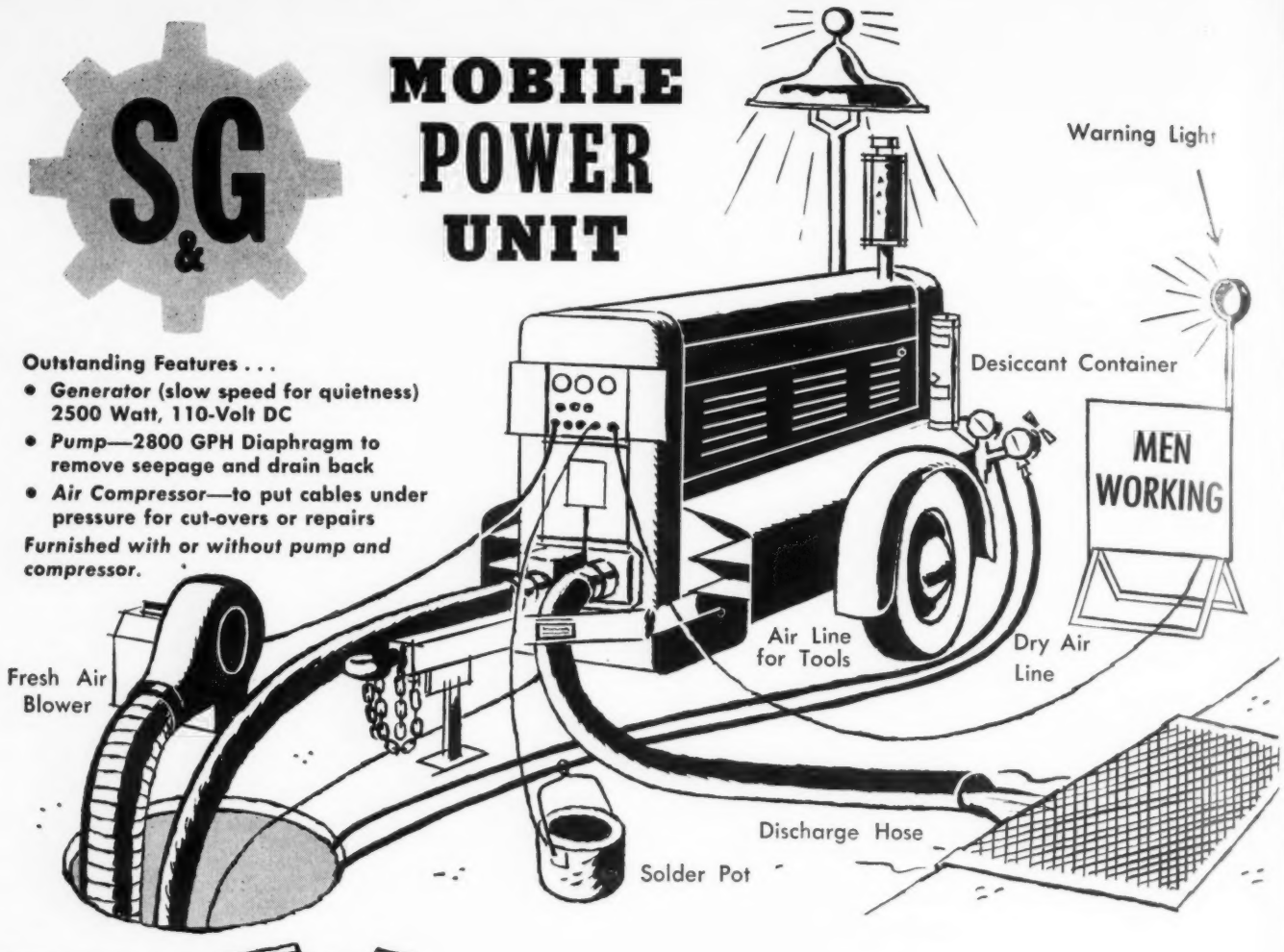

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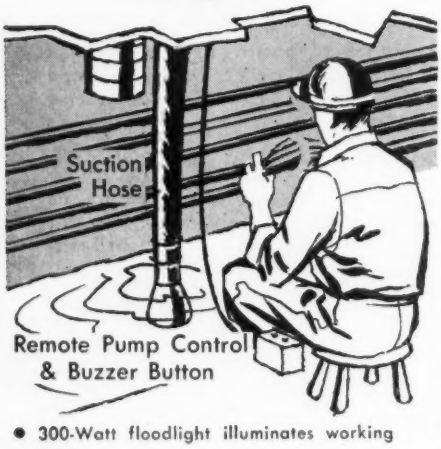
- ***Generator*** **(slow speed for quietness) 2500 Watt, 110-Volt DC**
- ***Pump*****—2800 GPH Diaphragm to remove seepage and drain back**
- ***Air Compressor*****—to put cables under pressure for cut-overs or repairs**

Furnished with or without pump and compressor.



- 300-Watt floodlight illuminates working area
- operates soldering pot and iron, electric and air tools
- electric blower to ventilate manhole
- supplies dry air for cable cut-overs, flash testing, etc.
- diaphragm pump can be operated from manhole by push button control
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of the sale by the Indiana Public Service Commission.

The sale marks the end of seven years of ownership and operation of the Klondike property by William Dring, who has managed the exchange since he purchased it from Grover and Victor Schalliol in 1948.

The Klondike exchange serves more than 400 subscribers in Wyatt and Woodland and in rural areas near Bremen, Wakarusa, South Bend, Mishawaka, Osceola, and Nappanee.

General of the SW Secures Rate Raises in Texas

General Telephone Co. of the Southwest, San Angelo, Tex., was granted the following rate increases in Texas during July:

Exchange	*Old*	*New*
Olton, dial, 651 stations		
One-party business	$7.75	$9.00
Two-party business	6.00	7.50
One-party residence	4.50	5.50
Two-party residence	3.75	4.75
Four-party residence	—	4.00
Jermyn, magneto, 42 stations		
One-party business	5.50	6.25
Two-party business	4.25	5.00
One-party residence	3.50	3.75
Two-party residence	3.00	3.25

Home T&T of Indiana Asks Rate Adjustments

The Home Telephone & Telegraph Co., Ft. Wayne, asked changes in its schedule of rates, termed "unjustly and unreasonably low," in a petition filed on July 20 with the Indiana Public Service Commission.

Although the petition indicates that the company seeks an increase, it does not ask a set schedule.

In its petition, Home T&T pointed out that its present schedule became effective Sept. 1, 1949, and when approved by the commission was the only increase in the company's local exchange rates since 1922.

N. C. Independent Asks To Take Over Another

The Hickory Telephone Co., at a hearing before the North Carolina Utilities Commission on Aug. 4, asked that the body approve its plans for taking over the Catawba Telephone Co.

No opposition to the request was made but a petition filed by Catawba residents asked for toll-free service with Newton after the Hickory company takes over. Company officials said extended service would be considered if

the Catawba subscribers are willing to pay higher rates to make up for the loss in long distance tolls. The petitioners said they would be willing to pay the higher rates.

Hickory Telephone serves Hickory, Valdese, Granite Falls and Longview. Catawba Telephone is owned by Leroy P. Spoon of Charlotte, and operates in the town of Catawba only.

Ohio Independent Requests Increase in Rates

The Chandlersville Telephone Exchange Co. which serves approximately 100 subscribers, on July 20 asked the Ohio Public Utilities Commission for a rate increase.

The company owner, Mrs. U. J. Howell, said the present rates do not yield a fair return on the value of the company's property.

Mrs. Howell said the present rates were 75 cents monthly for switching service for those who own their own lines and $1.25 to $1.50 for other subscribers.

Virginia Independent Sold to Another

The Lexington (Va.) Telephone Co. has acquired the assets of the Natural Bridge Telephone Co., Lexington, and will operate it in the future as part of the Lexington company, it was reported on July 19.

It is expected that this unification will aid in carrying out a planned improvement program.

At the same time, bonds were issued to pay off short-term bank loans.

These transactions were authorized by the Virginia Corporation Commission, according to Mrs. Jean S. Augustine, vice president and general manager of the company.

West Coast Authorized to Issue 150,000 Shares

West Coast Telephone Co., Everett, Wash., was authorized by the Oregon Public Utilities Commissioner on July 15 to issue 150,000 shares of common stock, par value $10 per share, to be sold at a price not less than $17 per share.

The proceeds will be used to pay for improvements. A Blyth & Co. Inc. group was to handle the offering (TELEPHONY, July 16, p. 40).

Nebraska Independent Buys Three Other Exchanges

The Northeast Nebraska Telephone Co. has completed the signing of agreements to purchase telephone company properties at Martinsburg, Dixon and Jackson, Neb., it was reported on July 21. Articles of incorporation also have been filed by the Northeast Nebraska company.

Howard Rasmussen of Hubbard, is president of the company's board of directors.

Virginia Company Prepares For Public Stock Offering

The Lee Telephone Co., Martinsville, Va., which operates systems in Virginia and North Carolina, announced on Aug. 3 that steps have been taken to convert the company from a private to a public corporation.

First step in the conversion, it said, was authorization by the Virginia Corporation Commission for the company to issue 100,000 shares of common stock on the market for public sale at $10 per share. An additional 150,000 shares of common stock will be retained by the present owner, B. L. Fisher of Martinsville.

The company also has secured approval of the stock sale from the North Carolina Utilities Commission (TELEPHONY, Aug. 6, p. 22). Frank G. LaPrade, secretary and general manager, said details of the stock offering have not been worked out, but that funds from the sale of the 100,000 shares will be used to retire $425,000 in preferred stock, and for expanding and improving the company's facilities.

The company's plant investment has increased from $3,078,035 in 1950, to $5,198,610 in 1955; its gross revenues from $809,575 in 1950, to $1,355,118 this year.

The Lee company serves a total of more than 19,000 subscribers in the two states.

Kan. Company Incorporates; Plans Consolidation

Incorporation of the Sedgwick Telephone Co., Dodge City, Kan., with George R. Gould as resident agent was announced on July 20 in Topeka.

Mr. Gould said the company was formed to purchase, consolidate, rehabilitate and operate several exchanges in Sedgwick County. Purchase is reported to be from the Southwestern Bell Telephone Co.

Kansas Company Purchases

The W. E. G. Dial Telephone, Inc., of Gardner, Kan., has bought the exchange at Eldorado Springs, Mo., it was reported on July 21.

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for:
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• Sizeable Power Bill Savings
A telephone exchange now using DC generators for charging the batteries can add one or more FLOTROLS and immediately obtain the precise voltage regulation characteristics of the FLOTROL for the entire exchange. The high efficiency of the FLOTROL will greatly reduce power consumption during those hours of the day when the FLOTROL alone is sufficient to carry the entire load; generators can be shut off during light load periods, thereby reducing the wear on the rotating equipment. By installation of FLOTROL capacity sufficient to carry the entire normal load, rotating equipment showing signs of wear can be saved for standby service, continuing its life indefinitely. The advantages obtainable from this type of installation are tremendous. For further information, send for Bulletin 161.
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REA TELEPHONE LOANS

Concluded from page 19

munity of 410 population, the rest of the telephone plant in the surrounding rural areas remained standing.

The town is now in the process of being rebuilt and telephone service will be restored as soon as damaged or demolished business houses and homes are made ready for occupancy.

Emergency service is now being provided over about 85 miles of company line which was restored to service with the assistance of members of the Kansas Independent Telephone Association and central office facilities loaned by the Southwestern Bell Telephone Co.

Because of the emergency situation, REA processed the company's application for funds in record time. An REA field representative first visited Udall late in June. The company filed its loan application on July 20 and REA did the final processing in approximately 48 hours.

Pat C. Hurd is president and manager of the Udall Telephone Co.

Government in Production?

"Economic production is the peculiar domain of private capital and effort. Government encroachment into that domain is not conducive to a larger total, particularly in a society which is well equipped as is our own with private managerial competence and all else that contributes to productive efficiency."—HARLEY L. LUTZ, *professor emeritus of public finance, Princeton University.*

Oklahoma Independent Owner Buys Third Exchange

Bob B. Gripe, owner of the telephone exchanges at Maramec and Blackburn, Okla., has purchased the Skedee (Okla.) Telephone Co., it was reported recently.

The purchase was made from Mr. and Mrs. C. O. McDugle who will continue to operate it for the new owner.

Mr. Gripe stated that he has applied for a loan (source unspecified) so he can install automatic systems at all three exchanges.

Mutual Responsibility

"It stands to reason that if men want security from their employer, they should help him to be strong enough to provide it. Brotherhood is nothing when it is expressed exclusively in words; it is everything when it is expressed in deeds."—H. E. SIMPSON, *president, Baltimore & Ohio Railroad Co.*

Copper Strike "Pinches" Cable

Telephone operating companies are feeling the effects of the strike in the copper mining and refining industry when it comes to getting their cable orders filled.

The month-old strike has resulted in the closing or limited operation of plants of the cable manufacturers supplying the telephone industry. The walkout has shut off about 60 per cent of the copper mined in this country, according to the *Wall Street Journal*.

In addition to the curtailment of production in this country, copper mines in Chile and Rhodesia, South Africa, have been struck, curtailing the copper supply from these countries.

It appears that the difficulty in obtaining cable will face the telephone industry for some time to come, even if the present strike is settled quickly, as manufacturers will still be forced to make cut-backs in production in August and possibly September.

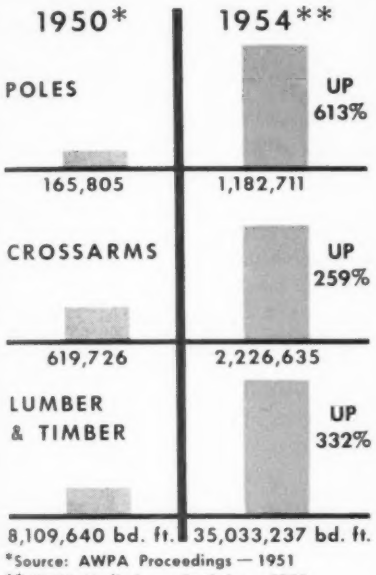
Prices of copper, too, are bouncing, according to the *Wall Street Journal*. Major U. S. producers, up to recently, were still posting an official 36 cents a pound standard price for refined electrolytic copper. But more and more users are paying premiums far above that level.

One cable manufacturer states that "the copper supply situation is worse than at any time in our history and we certainly cannot expect to maintain delivery schedules on telephone cable with any degree of accuracy. The real pinch will probably come in the month of September and, unless something happens by then, even should the copper strikes be settled quickly, it will no doubt be 60 to 90 days before we receive any copper in bar form."

TELEPHONY is bringing this situation to the attention of telephone companies so they will know the reason for slow deliveries (or no deliveries) of cable and for any price increase that might be quoted.

Penta use jumps 613% in four-year period

U. S. Government reports show big increase in use of Penta since 1950.



*Source: AWPA Proceedings — 1951
**AWPA Preliminary Statistics — 1955

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After wood is treated with Penta-in-oil solution, oil evaporates, leaving Penta securely locked in to give long-lasting protection from decay, and from termites, and all other wood-destroying insects as well. Because Penta is a uniform chemical, you can take increment borings and determine exact amount of preservative in wood by chemical analysis.

Heat, rain, frost, or snow can't bleed or leach Penta out of wood.

EASY MAINTENANCE—Clean, dry Penta-treated wood won't "burn" hands or stain clothing, makes line installation and maintenance easier.

ECONOMICAL—Not only do you save the cost of crossarm replacements when you preserve them with Penta, but you save the trouble and expense of freighting timber, working "hot" lines to switch attachments to countless crossarms every year. Crossarms treated with Penta can last the 30-year lifetime of a pole!

PENTA PROTECTS POLES, CROSSARMS, STUBS, BRACES, ANCHOR LOGS, PLATFORMS, PLANKING, CONSTRUCTION LUMBER. For FREE Penta "Poles and Crossarms" booklet, write Organic Chemicals Division, MONSANTO CHEMICAL COMPANY, Box 478-S-6, St. Louis 1, Missouri.

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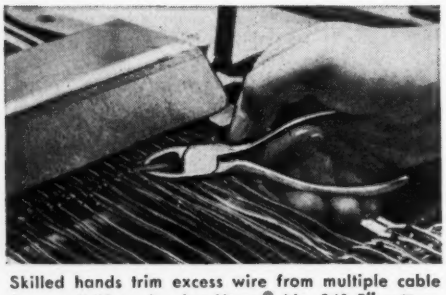
HELP SPEED WORK

In three months—at the Western Electric telephone repair service in Syracuse—a pair of these UTICA® No. 2291 pliers has been used to skin the insulation from 22,500 wire ends with no impairment of efficiency in the pliers.

Another popular tool at this Western Electric repair center is UTICA® "Long Nose" No. 226, here shown pulling a cable end through a terminal eyelet.



Skilled hands trim excess wire from multiple cable for a switchboard, using UTICA® No. 241-5" cutters.

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Jaw surfaces of all UTICA® cutting pliers (as well as UTICA® Adjustable Wrenches) are extra hardened by electronic induction to assure longer wear. And all cutting edges are hand honed.

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FACTORS OF A FAIR RATE OF RETURN

Concluded from page 22

could be around 35 per cent to 40 per cent.

After the rate of return, based on the cost of money and other factors previously mentioned, has been determined, the next question is the rate base to which this rate of return should be applied to provide an adequate return on the capital invested.

The value of the capital invested in a business is equal to the value placed on the assets representing the capital, and the value of these assets is dependent upon earning capacity.

Therefore, if an original cost rate base is used, the value of the capital is established at original cost and it is immediately impaired to the extent of the inflation that has taken place. This impairment will increase as new capital in depreciated current dollars is added.

Such a condition, if continued, would soon impair the capital of the utility industry to the point of ruination, and, of course, sources of new capital would completely disappear.

Cases Must Be Well Prepared

Fortunately, these problems of inflation have been recognized by many commissions. In those states where the original cost theory has been adopted, there is no trend away from that theory and towards fair value, but attempts have been made to give some relief, in some instances, by the use of a rate base as of the end of the period instead of an average rate base for the period; in others, by the allowance of at least a part of plant under construction.

Some commissions have added something to the rate of return which it would normally allow. These various methods are employed to give some relief on account of the factor of attrition, which is the decrease in rate of return caused by the addition and replacement of plant at current cost levels.

There has also been an increased effort on the part of the state commissions to shorten the regulatory lag which has so seriously affected the earnings of utilities during this period of rapid expansion.

In fairness to the commissions, it must be said that the cause of the earnings lag, to a substantial extent, may be laid to the companies themselves due to improper preparation of cases and to delays in filing applications until after serious and irreparable damage had been done.

The companies, having learned the hard way, are presenting their cases much more completely, and the combined efforts of the commissions and companies have substantially shortened the time necessary to process rate cases.

While the various methods adopted by commissions to alleviate the inflation problems are very helpful and welcome to the companies, they still afford only partial relief and do not provide a fair return on the fair value of the investment.

At best, any such forms of relief can be based only on conjecture, without any measuring stick to show how close they come to compensating for loss in purchasing power. I don't see how any such conclusion can possibly be reached without a determination of the value in current dollars of the capital invested in the business. I firmly believe that this condition still presents a very serious problem to the utility industry, and that further impairment of capital is inevitable unless a fair return is earned on the fair value of property devoted to furnishing service.

General of Ohio Sells $1,500,000 Bonds

General Telephone Co. of Ohio, Marion, sold on July 28 at par 1½ million dollars principal amount first mortgage bonds, 3.40 per cent series due 1985. The bonds were taken by four insurance companies.

The funds secured by General Telephone Co. of Ohio will be used to retire 1.2 million dollars in short-term bank loans, and to provide $300,000 for additional construction expenditures.

General Telephone Co. of Ohio operates 135 exchanges in 62 of the 88 counties in Ohio and serves over 100,000 telephones.

Kansas Independent Elects Head of Board of Directors

O. D. Dunlap was elected president of the board of the directors of the Mutual Telephone Co. of Eudora, Kan., to replace the vacancy left by the death of Elbe Roe.

Bert Seiwald is vice president; Ralph Terrell, secretary and Homer Gerstenberger is treasurer. George Bartz is manager. There are 528 telephones in use in the territory.

To Upgrade Politics

"We must gain more respect for the man in politics by raising the prestige of political life."—H. W. Dodds, *president, Princeton University.*

MECHANICAL CLOSURES

Concluded from page 30

The cases and terminals which have been made available initially are suitable for use on cables up to one inch outside diameter. Development work is in progress on sizes suitable for larger cables, and trials have been made on very large cases for use on underground cables.

Although the new cases and terminals are expected to find their principal use on plastic-sheathed cables they may also be used on lead-sheathed cables with minor changes in the installation procedure. Acceptance of the design has been favorable and the indications are that very substantial over-all savings will be realized.

Responsibility of the Individual

"Certainly we shall not be worthy of those who founded our Nation unless we strive to emulate the spirit of independence which motivated them. This means standing on our own feet, saving for our future, and not looking primarily to government, relatives, or friends for our well being. It means facing up to our local, state, and national problems. . . ."—*Arcata (Cal.) Union.*

Washington Man Elected

W. R. Jarmon, president of General Telephone Co. of the Northwest, Spokane, Wash., was elected 1955-56 president of the Inland Empire Science Fair Association by the group's board of directors, it was announced on Aug. 2.

Answers to Questions On Page 43

(1) Peg counts are essential as basic records from which equipment and force requirements are determined and through which traffic costs are controlled.

(2) This phrase may be used whenever the operator thinks it is suitable. It is a natural response to a customer's "Thank you," and is a pleasant way of terminating a contact with him.

(3) [illegible].

(4) [illegible].

(5) Use a phrase such as, "Yes, [illegible] emergency," "Right away," or "I'll try them immediately." The phrase "Hold the line, please," can be added when the operator thinks it is advisable.

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Model 201U76 "Proven" Service Body

DESIGNED JUST FOR YOU

Right side view showing convenient material and tool compartments.

Why be satisfied with less when literally thousands of Model 201-U76 Service Bodies are providing fast and economical service in the Public Utility industry daily.

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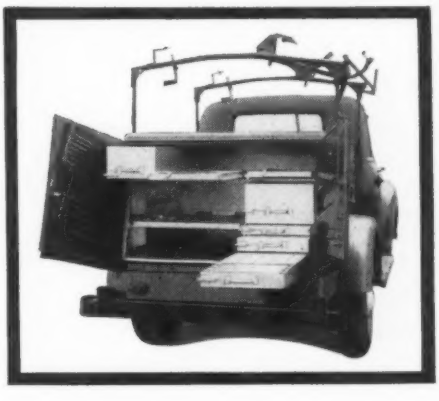

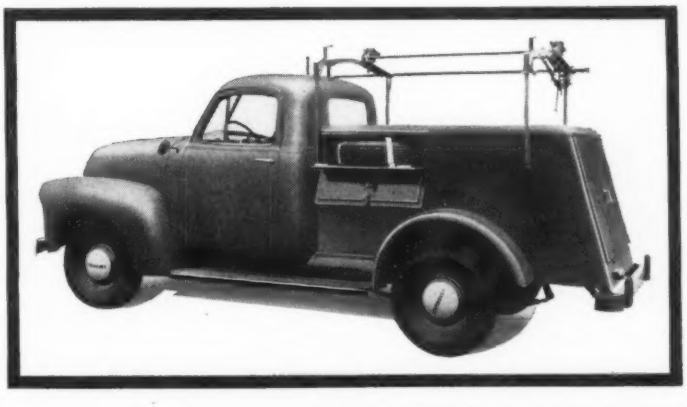

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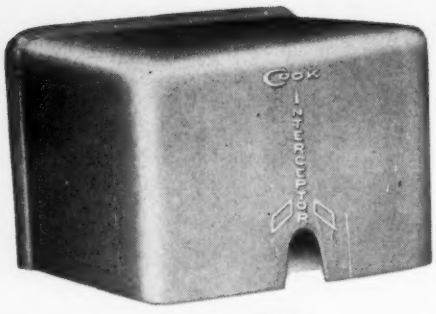

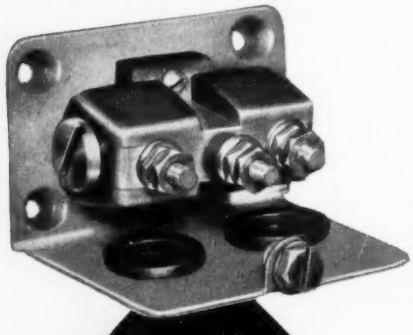

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M. F. LaCroix, Chairman Of General, Passes Away

Morris Felton LaCroix, Chairman of the Board of General Telephone Corp., died on July 28 at his home in Brookline, Mass., after a short illness. He was also president of the Copper Range Co. and senior partner of Paine, Webber, Jackson & Curtis.

Mr. LaCroix had been chairman of General Telephone Corp. since 1940 and was instrumental in organizing the present company.

Mr. LaCroix was born in Lynn, Mass., on Mar. 5, 1888, son of Edward Wilton LaCroix and Edith Lee Morris.

M. F. LaCROIX

He attended Lawrenceville Academy and Harvard College where he took his bachelor degree in 1910. He continued his studies at the Harvard Graduate School of Applied Science and was awarded a master's degree in mining engineering in 1911.

In 1954, he was awarded a degree of doctor of engineering by Michigan College of Mining and Technology in recognition of his work in developing the low grade ores of the Upper Michigan Peninsula into one of our important sources of copper.

Following his studies at Harvard, Mr. LaCroix joined the Cleveland-Cliffs Iron Co. as engineer and mining geologist. He left Cleveland-Cliffs Iron on the outbreak of World War I to join the Corps of Engineers. He saw service in France during 1918 and stayed on with the American Commission to negotiate the peace as a staff officer. He was discharged as a Major.

Shortly after his return to the United States in 1919, Mr. LaCroix married Esther H. Paine of Swampscott, Mass. The same year he joined Paine, Webber & Co. of Boston in which William A. Paine was senior partner. Paine, Webber was active in the development of western mining and oil resources and Mr. LaCroix specialized in investigating properties the firm had been asked to finance. Later on he was active in both the operation and management of mining properties. He became a partner of Paine, Webber in 1926. In recent years he has served as senior partner and chairman of the executive committee of Paine, Webber, Jackson & Curtis which today is one of the largest member firms of the New York Stock Exchange with 40 offices from coast to coast.

As president of the Copper Range Co., he negotiated a 67-million-dollar loan from the federal government to help build a processing plant for low grade ore of the Upper Michigan peninsula. As part of this project, Mr. LaCroix supervised the building of an entire new city.

Mr. LaCroix's other business affiliations included directorships in International Telephone & Telegraph Corp., Crown Cork International Corp., Big Sandy Co., and Sunflower Petroleum Products. He was a member of the board of trustees of Smith College; a member of the council of the Harvard Foundation for the Advancement of Study and Research and a member of the committee to visit the Department of Geological Sciences at Harvard University. He was also a trustee of the Roscoe B. Jackson Memorial Laboratory of Bar Harbor, Me., and of the Free Hospital for Women and the new Boston Museum of Science.

Mr. LaCroix is survived by four daughters: Mrs. Nelson J. Darling Jr.; Mrs. Bigelow Crocker Jr.; Mrs. Richard D. Phippen, and Mrs. John H. Knowles. A son, William Paine LaCroix, died in 1950 as a result of injuries received in action on the U. S. S. Bunker Hill during World War II.

Israel's Telephone System Has 30,000 Subscribers

Telephone service in Israel was improved and expanded during 1954, it was reported on July 11.

Radio-telephone services were inaugurated with Turkey, the U. S. S. R., Eastern Germany, Algeria, Tunisia, and Morocco, and automatic and semiautomatic exchanges have started operating for the Jaffa-Tel Aviv-Ramat Gan area, Mt. Carmel-Haifa, and Beersheba.

An additional 120 places—including all frontier villages—were included in the telephone net, which now comprises more than 30,000 subscribers, it was stated.

REA Program Consultants Issue Recommendations

Recommendations concerning the rural telephone program made by a group of consultants to the Rural Electrification Administration were announced on Aug. 2 by the U. S. Department of Agriculture. The recommendations grew out of a meeting in Washington on July 21. The consultants' statement follows:

(1) Under the REA telephone loan program established by Congress in October, 1949, to help improve and extend telephone service, the REA has made long-term, low-interest loans to finance modern telephone service for more than half a million farm families and other rural subscribers.

It is recognized that this is only a part of the tremendous progress made by the whole industry in modernizing and expanding rural service. Unquestionably, this progress permanently improves the economic status and social life of people in rural areas and is in the national interest.

It has been reassuring to see the steps taken to encourage cooperation between government and industry and also the progress made in solving various problems so as to provide comprehensive networks of telephone facilities.

The consultants urge that all components of the industry continue to work together in order to accomplish the great amount of improvement and expansion that is still needed to adequately serve farm families and other rural subscribers, and that the REA administrator and his staff continue their program of implementing this policy of cooperation.

(2) That REA take the leadership in sponsoring and scheduling accounting, management, public relations, and engineering seminars for REA telephone borrowers and all other interested parties, in cooperation with representatives of the telephone industry.

(3) That a survey be made of REA borrowers and potential borrowers for the purpose of learning which aspects of the program are liked and which are disliked and the reasons therefor, for obtaining suggestions which would make loan requirements more nearly fit the need and abilities of applicants, and for determining ways in which the program may be improved. Results of such a survey would be for the confidential use of the administrator and his staff in determining policies and practices to be followed.

(4) We commend the efforts of REA to encourage wider use of independent judgment by its engineers in assisting borrowers to promptly resolve engineering problems.

We concur with the telephone engineering division's position that practices specified in the REA engineering manuals are guides and that flexibility is necessary in applying the standards to specify borrower situations.

Consultants who took part in the July 21 meeting are:

L. E. Armfield, communications consultant of Fargo, N. D.; Frank S.

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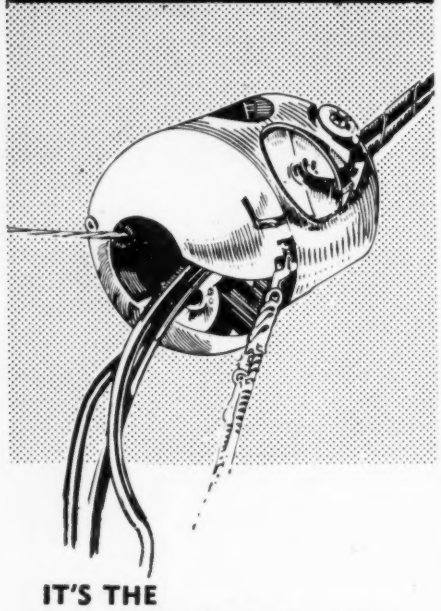

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Barnes, president of Rock Hill (S. C.) Telephone Co., and Glenn Bergland, manager of Winnebago Cooperative Telephone Association, Thompson, Iowa.

John A. Brady Sr., president of La-Fourche Telephone Co., Larose, La.; James L. Capel, president of Champaign County Telephone Co., Champaign, Ill., and Daniel B. Corman, vice president and chief engineer, Northeastern Telephone Co., Inc., Louisville, Ky.

J. K. Gallaway, vice president of The Winter Park (Fla.) Telephone Co.; Elnathan C. Gates, president of Minnesota Telephone Co., Minneapolis, Minn., and Ross Gault, manager of W.E.G. Dial Telephone, Inc., Wellsville, Kan.

J. Lee Keiger Sr., president of The Oldtown Telephone System, Inc., Winston-Salem, N. C.; Orla L. Moody, staff engineer of American Telephone & Telegraph Co., New York City, and Frank Richmond, manager of Twin Lakes Telephone Cooperative Corp., Gainsboro, Tenn.

Riggs Sheppherd, manager of Medina Electric Cooperative, Inc., Hondo, Tex.; Jack E. Smith, manager of Mecklenburg Electric Cooperative, Chase City, Va., and George P. Steinmetz, member of the Wisconsin Public Service Commission.

C. J. Stover, manager of Skagit Valley Telephone Co., Mt. Vernon, Wash., and C. R. Thiessen, president of Mid-Rivers Telephone Cooperative, Lambert, Mont.

Walter Harrison, manager of Georgia Electric Membership Corp., Millen, Ga., and William C. Henry, Bellevue, O., chairman of the Committee on Problems of Small Companies of United States Independent Telephone Association, were not able to attend.

Wheeling Steel Installs Huge Inter-City Network

What is believed to be the largest industrial inter-city telephone network in the world was put into operation recently when Wheeling Steel Corp. unveiled a new dial system which interconnects 11 plants on the Ohio and West Virginia sides of the Ohio River. The plants are located at Steubenville, Mingo Junction, Yorkville and Martins Ferry in Ohio; and at Follansbee, Beech Bottom, Wheeling and Benwood in West Virginia.

The company's new dial system, with its focal point at the general offices in Wheeling, was cut into service on July 30, according to J. Gordon Hutchinson, assistant comptroller of Wheeling Steel.

By means of an enlarged network of 54 inter-city tie lines, employes and officials of Wheeling Steel will be able to dial their own calls straight through to any telephone at any one of the corporation's plants. All details of the dialing procedure are covered in a new company-wide telephone directory. The

A special ceremony marking the addition of the 25,000th telephone to the system of the Chenango & Unadilla Telephone Corp., Norwich, N. Y., took place recently at the home of Dr. and Mrs. Ralph J. Gross, in Greene, N. Y. Shown here (left to right) are: William J. Evans, mayor of Greene; D. L. Brewer, Greene district manager; Guy L. Marvin, Greene supervisor and chairman of the Chenango board of supervisors; Dr. Gross; George Shoemaker, chief engineer and assistant general manager of the Chenango telephone corporation; William A. Seely, president and general manager, and Mrs. Gross. The company has grown from three central offices in 1922, serving some 3,000 telephones in Norwich, New Berlin and Waterville, to the present network of 32 central offices serving 25,000 telephones on lines extending into 11 counties. Of the 22,000 stations added since 1922, 12,000 were purchased from other companies, and the other 10,000 were the result of natural growth.

new system will provide direct communication on a round-the-clock basis.

A joint undertaking of the Chesapeake & Potomac Telephone Co. and the Ohio Bell Telephone Co., the project has involved the installation of new PBX dial equipment and the provision of 12 additional central office trunks and 18 new tie lines for the various plants. The over-all system now comprises 77 central office trunks and 50 tie lines.

Wheeling Steel has approximately 4,000 telephones in the plants and offices, and all are inter-connected through the new dial system.

California Company Installs Automatic Toll Ticketing

In July, California Water & Telephone Co. completed the installation of automatic toll ticketing equipment in its Granada, Cal., exchange and thus became the first multi-exchange telephone company in Los Angeles County to offer the advantages of subscriber toll dialing with automatic toll ticketing to all its subscribers in the Los Angeles metropolitan area, according to an announcement by the company.

California Water & Telephone Co.'s Los Angeles County exchanges serve approximately 53,000 stations (out of a company-wide total of 88,000) and in June of this year the company's revenue accounting department processed more than 800,000 toll charges from automatic toll ticketing tape.

With the adoption of automatic toll ticketing in association with subscriber toll dialing this company has greatly improved its subscriber service, since under this system operators are not required and calls go through faster because of the elimination of the delays inherent in operator handling. Economy, also, both in exchange operation and accounting procedures, is an important advantage of this system.

California Water & Telephone Co., which operates exchanges in Los Angeles, Riverside, and San Bernardino counties in Southern California, was one of the first telephone companies in the nation to adopt automatic toll ticketing in association with subscriber toll dialing. The company's first installation of this equipment was made in its Monrovia exchange at the time when this exchange was being converted from manual to dial operation. Monrovia's dial cut-over date was May 20, 1950.

In August, 1950, 128,000 toll call charges recorded on the automatic toll ticketing tape were processed by the company's revenue accounting department. In June of this year, the num-

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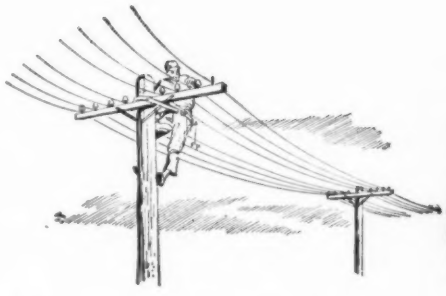

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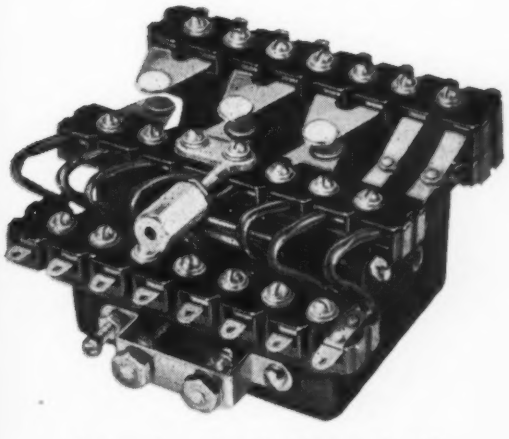

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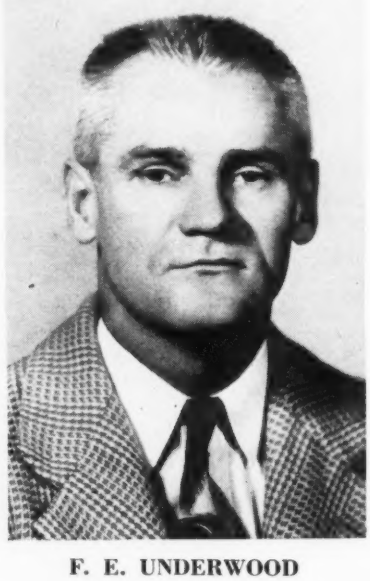
ber of monthly toll charges processed from tape had increased to more than 800,000.

Subscriber toll dialing with automatic toll ticketing for the company's Redlands exchange is scheduled for 1956.

With 92 per cent of its telephone stations dial operated, with its exchanges in the Los Angeles area providing 100 per cent message unit toll dialing with automatic toll ticketing, and with its revenue accounting department equipped with a comprehensive assembly of automatic accounting machines, California Water & Telephone Co. is following the modern trend toward automation wherever possible and is today one of the most thoroughly mechanized telephone operating companies in the United States, according to Chester H. Loveland, president of the company.

F. E. Underwood Named Kellogg Representative in S.E.

O. C. Bailey, assistant sales manager of Kellogg Switchboard & Supply Co., a division of International Telephone & Telegraph Corp., has announced the



F. E. UNDERWOOD

appointment of F. E. Underwood as field representative in the southeastern division.

Mr. Underwood, a former wireman and tester for the North Electric Co., and field installer for Federal Telephone & Radio Co., will travel North and South Carolina in the southeastern division, under the supervision of R. H. Smythe, division manager. He will have headquarters in Atlanta, Ga.

Service in Lebanon

Beirut, Lebanon, now has radio-telephone service, through the existing Paris circuit, with Algeria, Tunisia, Morocco, Dakar, Bamako, Brazzaville, Tananarive, Djibuti, East Germany and Czechoslovakia. This service began June 1.

Ansonia Names W. R. Storer To Southern Sales Force

The Ansonia Wire & Cable Co. recently appointed Walter R. Storer to its sales force to cover the state of Florida and the southern half of both Georgia and Alabama.

W. R. STORER

Mr. Storer has several years experience as a manufacturer's agent in Florida and in his new position will service the Independent telephone company accounts of Ankoseal telephone cable distributors in his area.

Homelite Corp. Purchased By Textron American, Inc.

Royal Little, chairman of the board of Textron American, Inc., announced on July 9 the purchase of the Homelite Corp. of Port Chester, N. Y., manufacturers of chain saws, generators, blowers and pumps, serving the telephone and utilities fields plus several others.

The Homelite Corp. was established in 1927 and was the pioneer in the design and manufacture of light-weight two-cycle gasoline-driven equipment for the construction industry, the company stated.

The officers of the Homelite company are: J. A. Abbott, president; Nelson Thompson, vice president-sales; R. C. McDonald, vice president-manufacturing; A. K. Newman, vice president-engineering; DeHaven Ross, secretary & treasurer, and Rita Powers, assistant secretary.

Homelite Corp. will be an independently operated subsidiary of Textron American, Inc. without change in management, personnel or policy.